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**A study to assess elementary and secondary general education
teachers' attitudes and knowledge of attention deficit
hyperactivity disorder**

Gunderson, Heather MacLeese, Ed.D.

Wayne State University, 1994

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A STUDY TO ASSESS ELEMENTARY AND SECONDARY GENERAL
EDUCATION TEACHERS' ATTITUDES AND KNOWLEDGE OF
ATTENTION DEFICIT HYPERACTIVITY DISORDER

BY

HEATHER MACLEESE GUNDERSON

DISSERTATION

Submitted to the Graduate School

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Dedication

To my mother, Joan Frances MacLeese of Maine.

To my father, James Gilpin IV of Connecticut.

To my husband, Wallace James Gunderson of Michigan.

To my friend, Karen Germayne of Michigan.

Acknowledgement

I would like to express my deepest gratitude to those friends, family, coworkers and professors who helped make the completion of this project possible.

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CHAPTER I
INTRODUCTION

This study examined the attitudes and knowledge of general education teachers regarding Attention Deficit Hyperactivity Disordered (ADHD) students in a rural public school setting. Educational systems are responsible for the identification, assessment and education of these handicapped individuals. The State Board of Education requires that special education provide services to ADHD students who also qualify as Learning Disabled (LD), Rule 340.1713 (see Appendix A); Emotionally Impaired (EI), Rule 340.1706 (see Appendix B); and Physically or Otherwise Health Impaired (POHI), Rule 340.1709 (see Appendix C). The educational systems are also mandated to provide free and appropriate education (FAPE) to ensure that all students have access to the opportunity of an appropriate education. With the passage of the Rehabilitation Act of 1973 (Schwarze and Lusk, 1977), ADHD is cited as being a potentially handicapping condition and educational systems are expected not to discriminate on the basis of a student's handicap. It is further expected that ADHD students will be identified and assessed, and those students who do not qualify for special education services will not be discriminated against. Rather, these ADHD students will be identified, assessed and provided appropriate educational adaptations in the general education environment.

Efforts to comply to Section 504 were initiated in July of 1977 by public community schools. Consequently, public

school districts have pre-referral teams to identify students who do not appear to be fully benefiting from their education. There are some who do not consider the ADHD diagnosis as being different from the Conduct Disorder diagnosis or the Oppositional Defiant diagnosis. Congress took its definition from the Diagnostic Statistical Manual, Third Edition Revised (DSM-III-R). The undifferentiated ADHD diagnosis has yet to be determined as a valid category and requires further research. However, ADHD is considered a potentially handicapping condition and the attitudes and knowledge of the teacher regarding ADHD would appear to impact whether or not the student is identified, assessed and appropriately educated.

The assessment process has a multidimensional nature because ADHD impacts behavioral, cognitive, social, emotional and physical aspects of the student. Thus, the assessment phase needs to be carried out by a multidisciplinary team. In a United States Department of Education memorandum, three Assistant Secretaries of Education, (Danila, Williams and MacDonald 1991, p. 1), reported that "three to five percent of school-aged children may have significant educational problems related to this disorder." Under Federal Law, public schools must ensure that these three to five percent of students reach their "fullest potential." In Michigan, the Michigan Mandatory Special Education Act 451 states "maximum potential" as our goal. An adequate assessment requires a multidisciplinary team which includes the teacher, the special

education teacher, school counselor, school administrators, parent(s), and therapist. This team gathers information for the physician to make a medical diagnosis.

The treatment plan phase is based on the successful completion of the prior steps of identification and assessment (Jayantne, 1986). The general education teacher is expected to enlist those support persons that make up the multi-disciplinary team to assist him in developing an educational plan for that student. It is expected that the teacher will have knowledge in ADHD educational treatment methods or, at minimum, be able to access that information and have the tools and resources available to provide those interventions.

Collaboration is important in all three phases. However, teachers and parents, the primary persons responsible for the follow through of all these stages, have a difficult time working together (Fiqua, Hegland, Karas, 1985). Teachers feel that they have not been given the training to orchestrate a collaborative effort between the home and school, and through failed attempts commonly perceive this effort to be a waste of time.

Problem

General education teachers have been given additional responsibilities with the enactment of Section 504 (see Appendix D). Providing appropriate education to those 3% to 5% of ADHD students who have significant educational problems (Danila, Williams and MacDonald, 1991) primarily rests with the general education teacher. It is expected that Section

504 will influence the schools to appropriately educate rather than discriminate against the ADHD student. Critical components involved in providing an appropriate education for ADHD students are the identification, assessment of these students, and the provision of an educational treatment plan. Understanding ADHD is crucial for its identification; the collaborative effort is crucial for an adequate assessment and treatment plan; and, finally, the teacher needs to possess the willingness, knowledge, skills and resources to implement the plan. The teacher's attitude and knowledge of ADHD is essential for this process.

Research supports the need for a collaborative effort to help improve a student's performance. Research also supports very specific treatment methods to accomplish this goal. The intent of the study was to examine the relationship between general education teachers' knowledge and attitudes with regard to ADHD and teachers' gender, level of education and prior experience with ADHD students.

Purpose of Study

The purpose of this study was to identify general education teachers' attitudes and knowledge of ADHD students, in three rural public school settings, with respect to certain variables: teachers' sex, teachers' level of education, and teachers' prior experience with diagnosed ADHD students. The identification of general educators' attitudes and knowledge is necessary for the school district to assess their own abilities to fulfill the mandates of Section 504 and need for

staff development.

Need for this Study

It is clear that Section 504 will be instrumental in requiring teachers to look at individual students and their differences rather than assume that they are working with a group of homogeneous students. Although it mandates that the educational system will not discriminate against potentially handicapping conditions, a study is needed to assess the attitudes of general education teachers with regard to these conditions. The feasibility for an ADHD student to be appropriately identified, assessed and treated in a collaborative manner can be significantly hindered by negative, discriminatory attitudes or lack of knowledge. The study attempted to identify the teachers' degree of discriminatory attitudes and knowledge level of ADHD students by teachers' gender, prior experience, and level of education. No studies were found regarding attitudes toward ADHD persons. If it becomes evident that discriminatory attitudes or knowledge levels relate to teachers' gender, level of education, or prior experience with ADHD students, then the educational systems can use this information to address the problems of discrimination against potentially handicapping conditions.

Null Hypotheses

- I. There will be no statistically significant difference between males and females on teacher attitudes toward ADHD.

- II. There will be no statistically significant difference between males and females on teacher knowledge of ADHD.
- III. There will be no statistically significant difference between general education teachers who have prior experience with ADHD students and those who do not have prior experience on attitudes toward ADHD.
- IV. There will be no statistically significant difference between general education teachers who have prior experience with ADHD students and those who do not have prior experience on knowledge of ADHD.
- V. There will be no statistically significant difference between the general education teachers' level of education and their attitudes toward ADHD.
- VI. There will be no statistically significant difference between the general education teachers' level of education and their knowledge of ADHD.

Limitations

There are several limitations of this attitudinal and knowledge study which effect both validity and reliability. This study was geographically limited to a rural setting in Southeastern Lapeer County which limits the study's validity when generalizing the results to larger urban settings.

The school building principals administered the survey to their general education teachers in a 30-minute staff meeting. The experimenter was present in the room to oversee the administration of the surveys. As a result, the validity of the results may be questioned due to any Hawthorn Effects,

Pygmalion Effects or Demand Characteristic Effects. Subtle cues presented by the principal and experimenter (Assistant Director of Special Education, previously Special Education School Social Worker) may have elicited an expectation that the respondents must present themselves in a knowledgeable, socially unbiased and anti-discriminatory manner on the survey.

A third limitation is the survey instrument itself. The six-point Likert Scale accuracy of response is based on the teacher's self-report. As in any self-report assessment, this scale is limited to measuring what the respondents think they know and not what they do in fact know; thereby measuring the teacher's confidence in their knowledge rather than the actual knowledge. This would have an effect on reliability.

Definition of Terms

The terms listed below were defined as follows:

- 1) Section 504 - An anti-discrimination section for potentially handicapping conditions of the 1973 Rehabilitation Act.
- 2) ADHD - Attention Deficit Hyperactivity Disorder is used to identify both the impulsive and hyperactive child as well as the inattentive child not exhibiting hyperactivity.
- 3) UADD - Undifferentiated Attention Deficit Disorder is a diagnosis that is used to identify the inattentive child rather than the impulsive and hyperactive child.
- 4) Collaborative Effort - Multidisciplinary team of specialists involved with the student including teachers,

administrators, social workers, school psychologists, private psychotherapists, physicians and parents.

- 5) Diagnostic Statistical Manual, Third Edition, Revised (DSM-III-R) - A reference used by social workers, psychologists, psychiatrists and physicians for diagnosis.
- 6) Educational Treatment Plan - The treatment plan of educational interventions.
- 7) Identification - Recognition of ADHD characteristics and the referral that student to the school building administrator.
- 8) Assessment - The process of evaluation of the student conducted by the multidisciplinary team.
- 9) Attitude - A feeling or judgment regarding ADHD that may be expressed verbally or behaviorally.
- 10) Knowledge - Awareness of the body of information regarding Attention Deficit Hyperactivity Disorder.
- 11) Handicapped Person - Any person who has a physical or mental impairment which substantially limits one or more major life activities or has a record of such an impairment; or is regarded as having such an impairment (Schwarze and Lusk, 1977).
- 12) Residual ADHD - Symptoms of ADHD exhibited throughout adolescence and into adulthood.

CHAPTER II
REVIEW OF RELATED LITERATURE

INTRODUCTION

The enactment of Section 504 of the Rehabilitation Act of 1973 mandates that school districts provide identification, evaluation and a free and appropriate education to handicapped students. A handicapped person is defined as: "Any person who has a physical or mental impairment which substantially limits one or more major life activities or has a record of such an impairment; or is regarded as having such an impairment." (Schwarze and Lusk, 1977, p. 1) Learning is cited as being a major life activity. ADHD is cited as being a potentially handicapping condition.

A literature review of ADHD is presented in this chapter with special focus on teacher attitudes, knowledge, identification, assessment, and treatment methods as related to ADHD.

Attitudes

After a thorough Educational Resources and Information Center (ERIC) search, no research regarding attitudes and knowledge toward ADHD students was found. However, there was a lot of research which examined attitudes and knowledge of another handicapping condition, learning disabilities. At the post secondary level, staff attitudes and knowledge of Learning Disabilities have been examined in relation to demographic variables.

Shaw and Norlander (1986, p. 80) stated, "As learning

disabled students increasingly seek post secondary education, skilled personnel will be required to meet their needs." The same can be said of ADHD students. According to Barkley (1993), 25% of ADHD children have specific learning disabilities. Though this may be a symptom of ADHD rather than an actual cognitive deficit, LD and ADHD are considered to be potentially handicapping conditions and must be accommodated rather than discriminated against. The Shaw and Norlander article raised questions regarding methods for identifying learning disabled students, assessing these students, and assisting instructors at the post secondary level to become skilled in meeting the needs of these nontraditional or handicapped students. Shaw and Norlander recommended further research and program evaluation to assess the feasibility of accommodating handicapped students, suggested student support services be developed and recommended training of direct service personnel.

Aksamit, Morris and Levenberger (1987) examined the attitudes and knowledge that post secondary faculty members had of learning disabled students. These researchers, at the University of Nebraska-Lincoln, were addressing implications for staff development and future research.

The results of the study indicated that, attitudinally, post secondary instructors were generally accepting and held relatively positive attitudes toward learning disabled students. The average item survey score was 4.17 on the 6 point scale, with scaled responses of 1-3 considered negative

and scaled responses of 4-6 being positive. Attitudinally, female respondents had more positive responses than male respondents, and those with prior experience with an LD student also had more favorable attitudes than those respondents who did not have prior experience. Respondents tended to be positive in their overall attitude toward learning disabled students, however, the attitude subscale mean was in the lower end of the positive scale.

Knowledge

The Aksamit, et al. study's knowledge subscale yielded an average item score of 3.25, which falls on the lower, or negative, end of the scale. Specific low item scores revealed limited knowledge of the identification, assisting, and referring of LD students. These findings suggest specific needs for staff development within their institutions, and perhaps other post secondary institutions.

Identification

According to Nichamin and Windell (1984) ADHD characteristics change as the child ages. The preschooler is overactive, not requiring much sleep. The child is irritable, demanding, and noncompliant, with aggressive outbursts and tantrums. The parents will usually complain that they cannot take the child with them when they go out and cannot leave him home with a babysitter. They also have difficulties with day care centers, often having to move from one center to another.

Nichamin and Windell (1984) report that the ADHD student is typically identified when he enters the educational

setting. These students have increased difficulty adapting to the structured setting of schedules, new authority figures, and the stimulus of a group setting of twenty or more children. When the ADHD student enters school, that student is recognized and identified as "immature," being unable to follow directions or conform to the group. The student is usually in need of constant redirection.

The school setting can be difficult for families of ADHD children. Often parent/teacher conferences include long lists of problems, both academic and social. A description of the student usually includes the following characteristics: disruptive, antagonistic, lazy, irresponsible, edgy, impulsive, speaks out in class, disrespectful, and in need of retention.

Some parents give up, feeling they cannot motivate their child. The child, totally frustrated, also gives up. They often react to repeated academic failures by exhibiting antisocial behavior. The hopeless feelings lead to dropping out of school, thus putting additional strain on the family unit as parents fear for the future of their child who has no training (Michigan Department of Education 1993).

The ADHD symptoms usually begin to reduce around the same time that the child has plans of quitting school and/or running away from home. If attempts can be made to keep the ADHD adolescent in a stable, structured environment past this point, improvements in behavior may become evident. There is little or no research base examining the prognosis of this

disorder into the mid to late twenties, though some research suggests that antisocial behaviors continue to be evident after 21 years of age. (Garfinkel 1986)

Garfinkel and Shapiro (1986) found in a screening of 315 elementary students that 2.3% had ADHD symptoms, 3.6% had symptoms of a Conduct Disorder and an additional 3.0% had both ADHD and Conduct Disorder symptoms. These 8.9% of students were reported to be more likely to come from broken homes and were receiving remedial help in school. The 7 to 12 year olds also had come from lower socio-economic status (SES) income brackets and were more frequently categorized as learning disabled. Shapiro & Garfinkel question whether ADHD exists as an independent syndrome since its similarity to the Conduct Disorder is too great.

Offord, as reported by Shapiro, et al. (1986), found a distinction between hyperactive conduct disordered children and nonhyperactive conduct disordered children. The hyperactive delinquents were reported to have a lower birth weight and a higher frequency of delivery and postnatal complications. These groups did not differ in SES or family organization. Shapiro and Garfinkel (1986) state:

"These results suggest that characteristics associated with ADHD are not specific to this syndrome and should not be viewed as exclusive of conduct disorder." (p. 818)

According to Robin (1990) more males manifest the disorder than females. The ratios vary from 3:1 in non-referred children to 6:1 in the clinical setting. Etiological

research indicates neurological factors which may be genetically influenced. Chemicals such as dopamine and noradrenaline which influence behavior, learning and emotions are said to be in decreased levels and responsible for the attention and inhibitory control problems. As reported in the Michigan Department of Education Symposium on ADHD Proceedings Document (1991), Zametkin and Rapoport found abnormal glucose metabolism patterns in the brains of individuals with ADHD.

Rappley (1991) cites other possible causes of ADHD to include post-concussive syndrome, meningitis, lead poisoning and fetal syndromes and genetic syndromes. All of these injuries have been associated with problems in attention, organization, memory, learning problems, and impulsivity. In addition, alcohol cocaine fetal insult, genetic syndromes of Fragile X and Prader Willi are associated with attention, impulsivity and learning problems.

As reported in Robin (1991), Barkley found that 83.3% of ADHD children continued to manifest characteristics of ADHD into adolescence. Of a group of 123 ADHD children and 60 matched controls, the follow-up study revealed:

"29% had been retained for at least one grade compared to 10% of the controls. 10% had dropped out of school compared to 0% of the controls. They had more suspensions and expulsions than the controls. They had significantly poorer mean achievement on the Wide Range Achievement Test (WRAT) than the controls in Reading (90 vs. 107), Spelling (89 vs. 104) and Arithmetic (87 vs. 106). ADHD youngsters showed more cigarette and

alcohol use but not more drug use than the controls. Families and ADHD adolescents were in disarray, with high divorce rates and tremendous conflict." (p.8).

However, Barkley's research also found that a high socioeconomic status, high intellect, good early childhood relations, low aggressiveness and minimal parental pathologies were associated with good outcomes.

According to Robin (1991) the ADHD diagnosis may involve differential diagnosing, as there are commonly occurring co-morbidity conditions that have similar or overlapping symptoms of ADHD. Those co-morbid conditions include low intellectual ability, learning disability, speech and language problems, oppositional defiant disorder, conduct disorder and depressive disorders.

According to Barkley (1993) 80% of the conduct disordered are ADHD. Forty-five percent of the ADHD population is conduct disordered. Sixty percent of ADHD individuals are oppositional defiant disorder and 25% exhibit characteristics warranting an anti-social personality disorder. Barkley reports 30% to 50% of ADHD individuals also exhibit an anxiety disorder and 10% to 30% exhibit a major depressive disorder.

However, according to Barkley, as reported in Robin (1990), 23% of ADHD individuals have co-morbidity for a learning disability, 44% have at least one other psychiatric diagnosis, 40% have oppositional defiant disorder, 21-45% have a conduct disorder and 20-30% have a mood disorder.

In regards to speech and language problems, Barkley

(1990) found 10-54% had expressive language delays.

Assessment

The assessment of the ADHD child can involve: neurological examinations, psychiatric evaluations, psychological and social work reports, self-report questionnaires, electrophysiological responses, and neurochemical markers. A clinician may use the Connor's Teacher Rating Scale, which is reported to yield the diagnosis of ADHD with a high degree of reliability and validity. The scale is also simple to administer. In addition to the Connor's Parent and Teacher Rating Scales, the Weiry Weiss and Peters Activity Rating Scale, the Auchenback Behavioral Checklist, and the Barkley Situations Questionnaire are frequently used.

In the assessment process, the student is evaluated for three main characteristics: inattention, impulsivity, and hyperactivity (DSM-III-R, 1987). There were several subtypes of ADHD: Attention Deficit Disorder with Hyperactivity, Attention Deficit Disorder without Hyperactivity, Attention Deficit Disorder with a Learning Disability, and Attention Deficit Disorder with a Conduct Disorder. These subtypes were consolidated into two diagnosis categories: 1) Undifferentiated Attention Deficit Disorder (314.00), marked primarily by inattention, and 2) Attention Deficit Hyperactivity Disorder (314.01), marked by inattention, impulsivity and hyperactivity. The DSM-III-R lists the characteristics of ADHD as:

- A. Inattention. At least three of the following:
 - 1. Often fails to finish things he/she starts.
 - 2. Often does not seem to listen.
 - 3. Easily distracted.
 - 4. Has difficulty concentrating on school work or other tasks requiring sustained attention.
 - 5. Has difficulty sticking to a play activity.
- B. Impulsivity. At least three of the following:
 - 1. Often acts before thinking.
 - 2. Shifts excessively from one activity to another.
 - 3. Has difficulty organizing work (this not being due to cognitive impairment).
 - 4. Needs a lot of supervision.
 - 5. Frequently calls out in class.
 - 6. Has difficulty awaiting turn in games or group situations.
- C. Hyperactivity. At least two of the following:
 - 1. Runs about or climbs on things excessively.
 - 2. Has difficulty sitting still or fidgets excessively.
 - 3. Has difficulty staying seated.
 - 4. Moves about excessively during sleep.
 - 5. Is always "on the go" or acts as if "driven by a motor."
- D. Onset before the age of seven.
- E. Duration of at least six months.

F. Not due to schizophrenia, affective disorder, or severe or profound mental retardation.

Craighead, Meyers, & Craighead (1985) report on the child's environment in regards to the assessment. If the child is deeply involved in their school and peer relationships, this must be considered, thus, requiring assessment and intervention to include social support persons within the environment. Treatment outcomes can be improved by utilizing peers, teachers, day care staff, and parents in the interventions thus ensuring that they will approach the problem as a part of the same solution.

In the collaborative effort, the team has the difficult task of reducing the broader terms of hyperactivity or inattentiveness to specifics of when, where, and how the child manifests these conditions. The frequency and duration can be monitored in the baselining stage while examining controlling conditions of antecedent behavior and consequence. The variety of settings (school, home and broader community) can yield data which gives the team environmental clues of how the structure of the setting alters the manifestation of problematic ADHD behaviors. For example, in the smaller group settings the behaviors tend to decrease as the student can use one person as an aid to direct their attention. (Craighead, Meyers & Craighead, 1985)

Methods of Treatment

Kendall (1985) described the treatment of childhood disorders based on two factors. He felt the contingencies and

models of the environment coupled with cognitive processing needed to be emphasized. This cognitive-behavioral perspective is based on the belief that deviant behavior is a learned acquisition and can be treated in terms of the environmental structure and cognitively processed stimuli and consequences. The teacher can reinforce a child's problem-solving skills, building a skill repertoire that the child can use as well as an environment to prompt and reinforce the acquisition of those skills.

The ADHD child has great difficulty controlling their behavior and this influences other aspects of their life. The cognitive-behavioral approach focuses on the acquisition of self-control. It examines the factors that have interfered with this development in order to create the interventions.

The cognitive-behavioral treatment also examines the attributional process and belief systems of the various persons involved in the treatment process. The expectations people have of the child, the intervention, and the progress of treatment have an impact on the treatment outcome. These expectations may need to be explored and clarified within the multidisciplinary team to prevent misconceptions which may lead to disengagement from the therapy.

Duriak (1975) in examining developmental factors felt memory capacity, attentional capacity, comprehension and conceptual reasoning abilities must be evaluated because these factors can influence the interventions and age appropriateness of the intervention and, thus, the outcomes.

These abilities distinguish the cognitive-behavioral therapy used with adults from the interventions used with children. If the child is not at a preconceptual reasoning age, therapies or educational treatments become much more specific and concrete.

Braswell and Kendall (1988) describe self-instructional training as systematically approaching and evaluating problem situations. This approach helps parents who may feel that ADHD is a result of poor parenting or caused by a chemical imbalance that must be medicated. Teaching specific skills reframes the problem as manageable, providing specific teachings to the child and assistance to the family to create a structured, contingent environment.

Blechman, Olson & Hellman (1976) created a family contract game to help teach problem-solving and contingency contracting skills by removing power struggles and conflict. This game emphasized a six-step systematic approach: 1) to identify the problem in behavioral terms, 2) gather information, 3) generate behavioral alternatives, 4) choose choice options, 5) evaluate consequences, and 6) select option. Since power struggles also occur with the teacher, this may also be useful in the schools.

Positive problem-solving consists of instruction and rehearsal of a method to approach problems that reduces conflict. Another method used by the individual is positive self-directed statements. These statements help the child to encourage themselves with positive reinforcing statements of

their progress. Mischel and Patterson (1976) suggest that the self-praising statements help reduce some of the frustration the child would encounter. The study showed that children who were provided self-instructional statements were able to cope with environmental distractions, allowing them to work longer.

Monohan and O'Leary (1971) found self-instructional statements also reduced rule breaking behavior. Those children utilizing self-instructional statements complied with the rules more often. Richard and Dodge (1982) found social and cognitive deficits among aggressive boys. It was also seen that aggressive boys differ from the norm in that the aggressive boys lacked a repertoire of evaluating options or problem-solving.

Sarason (1981) used a problem-solving packet with delinquents and dropout students. The one year follow up found the treatment group exposed to the problem-solving skills had fewer absences, lower rates of depression, and fewer disciplinary actions.

Lockman and Curry (1986) provided anger coping skills combined with self-instructional training and goal setting. It was found to be effective in reducing aggression, off-task behaviors, and parent ratings showed an increase of self-esteem.

These research studies are applicable to the ADHD child. The ADHD child experiences a chronic failure in school and interpersonal relations, leading to the ADHD adolescent developing maladjusted behaviors if the characteristics do not

become manageable. When this occurs, the ADHD child begins to associate with a socially deviant peer group, acquiring conduct disordered behaviors and engaging in substance abuse.

Lockman, Burch, Curry & Lampton (1984) examined the effects of an anger-coping training program with aggressive 9-11 year olds. The program consisted of 12 sessions focusing on problem-solving skills and goal-setting exercises in a contingent reinforcement classroom setting. A significant reduction in disruptive aggressive off-task behaviors was seen with the treatment group.

Pisteman, et al. (1989) improved the parent style of interaction and compliance of ADHD preschoolers after exposing the treatment group to parent training.

It appears that cognitive behavioral methods combined with behavior management contingencies, and the reinforcing of these acquired or learned skills, are needed to create a lasting change in behavior. Braswell, et al. (1985), found that positive statements or social rewards like "keep up the good work" increased positive outcomes. These social rewards combined with: contingent reinforcers, rewarding positive self-statements, modeling, and the child's use of self-instructional coping statements, can reduce the frustration that may normally elicit an outburst or off-task behaviors.

Kendall and Finch (1976) examined concrete labeling versus conceptual labeling in problem-solving training. Concrete labeling focused on the learning of a specific task compared to conceptual labeling, which involved the training

of a generic, abstract strategy to approach problems in various settings. Both the conceptually trained and concretely trained groups showed a decrease of hyperactivity at post-test and at a one-month follow-up. However, beneficial treatment effects lasted longer for the conceptually trained children.

Kendall and Zupan (1987) examined the effects that group training size had on the effectiveness of training. They found both individually and group trained individuals to have significant improvements on self-control at post treatment. In a follow up study, they found that the individually treated subjects had greater recall of the instructions and usage of problem-solving skills than the subjects who were taught in a group setting.

Duriak & Ruppucci (1973) examined another aspect of cognitive behavior therapy called Attribution Training. It explores what the client feels is responsible for events or conditions the client is in. Duriak & Ruppucci found that both overachievers and underachievers make maladaptive attributions when faced with failure at a task. These maladaptive attributions involved internalizing the failure and blaming of themselves rather than reframing the failure to mean that more effort is required.

In 1975, Duriak had success in retraining children to attribute their failure to their lack of effort rather than lack of ability. When the children were met with failure, the child was repeatedly told, "failure means you try harder."

The weakness of this technique is that the teacher must be aware of the child's abilities and inabilities or the child may perceive themselves to be failures when they are trying hard.

Modeling is a technique used to train the child. Bandura and Rosenthal (1978) used modeling as an effective way to eliminate the behavioral deficits as well as reducing anxiety. There were two types of modeling employed, the mastery and coping models. The mastery model performs the task without any difficulty. The coping model accomplishes the task despite the difficulties encountered. The coping model problem-solves through the completion of the task. It was also found that models which involved speaking aloud and describing their frustrated feelings and how they are going to solve those problems were more effective than mute modeling. The verbal coping model appears to replicate what the client encounters and has greater utility for the client than the mastery model.

Another cognitive technique shown to decrease ADHD characteristics is self-monitoring. Henshaw, Whalen and Hinker (1986) found children trained to monitor their own behavior exhibited more appropriate behavior in free time settings. These children evaluated their behavior after the sounding of a tone. Abikoff added documentation to the monitoring. The child evaluated whether they were on-task or off-task, then were required to document it or record it on a sheet of paper. This increased academic performance.

Hallahan, et al. (1979) found that self-assessment and recording of on-task behaviors had beneficial effects on attention to task behaviors.

Lloyd, et al. (1982) had students assess themselves at timed intervals and record whether they were paying attention. In an AB reversal design, which involves an observation baseline period, A, and an intervention period, B, with a reversal or removal of intervention to determine if behavior returns to baseline without the intervention, the three treatments (the untreated, self-assessment, and self-assessment with self-recording), were alternated. The results of this study showed self-assessment and recording to be most beneficial over the untreated and self-assessment groups. It was suggested that the self-recording component may have led the child to more carefully evaluate their performance.

Rosenberg, et al. (1985) studied the acquisition of simple or difficult tasks among distractable children, reinforcing attentiveness and accurate performance in one group and solely accurate performance in the other treatment group. Students assigned to the difficult task group, reinforced for correct answers, had poorer scores and a greater amount of off-task behaviors than those reinforced for attentiveness and accuracy.

Schleser (1981) examined the acquisition of specific or concrete problem-solving skills and general or conceptual problem-solving skills on two groups of preoperational (an early cognitive stage) and operational children (a later

cognitive stage). The study found the concrete operational children benefited greater than the preoperational children trained concretely and conceptually. The concretely trained children improved more than the conceptually trained; however, the conceptually trained had benefited greater in term of generalization to other problem-solving tasks.

Schleser & Thackway (1982) note:
"Child variables, particularly cognitive level, interact with task performance, cognitive tempo, and response to training. Generalization of self-instruction depends on the type of instructional content and the mode of delivery." (p. 45)

Impulsive behavior is a primary cause for referrals of children into the mental health system (Kendall & Finch, 1978). This impulsivity is manifested as aggressive disruptive behaviors, academic deficiencies, inability to resist temptation, and impaired problem-solving skills, according to Schleser & Thackway (1982).

Many early attempts to use self-instructional techniques failed to generalize to the classroom setting. The classroom setting differs from the clinical setting in that it requires the design and development of the educational treatment plan to be specific to the structure of the educational setting. The design of the plan needs to be tailored to those involved in the intervention (teachers, students, administrators and parents) and the structure and resources involved for proper utilization. Structure and resource problems that would hinder generalization would include the lack of structure on the playground and lack of communication resources (phones)

that would allow the teacher to access the parents.

Duriak (1982) examined the family therapist's role in the school setting. As a family therapist, the beneficial outcomes of intervention are dependent on a multitude of environmental variables. Duriak feels the therapist must effectively recruit, select, train, and supervise school personnel in order to ensure positive results in that environment.

Lacayo, Sherwood & Morris (1981) reported that school psychologists devote 55% of their time to administrative and consultive duties, 39% to testing, and 6% to counseling in individual and group settings. This resource may be available in some districts, while others may not have psychologists involved in direct or indirect treatment and no school social workers or school counselors available. The teacher must explore what resources they have to work with in the school environment to help increase the effectiveness of an intervention.

If ADHD is not controlled, behaviors of truancy, stealing, lying, and aggressiveness become highly likely. The substance abuse problem becomes evident only after the manifestations of the conduct disorder. These findings help the collaborative team to anticipate problems and be proactive rather than reactive with the family and the child. It also helps to alleviate a concern of many parents.

At times parents will refuse medication for their child. Many become concerned that this medication may turn their

child into a drug abuser. The current medications have beneficial results on approximately 70% of the children. If these children were kept from utilizing this successful intervention by their parents, the statistics suggest that their children may, in fact, develop deviant social relationships and a substance abuse problem as they are met with repeated failure in many aspects of their life.

Rappley (1991), as cited in the Symposium on ADHD, reports of studies in which the dopamine centers of rat brains have been destroyed and Ritalin is prescribed to restore the dopamine levels in the brain. The rats who were placed in normal rat families did better in learning and organizing than the damaged rats left with damaged rat families.

Commonly prescribed medical interventions include the following psychostimulants: Ritalin, Dexedrine, and Cylert. These medications have helped children control reactivity to over stimulation and distractibility, leading to greater attentiveness and less aggression and impulsivity. Ritalin has been reported to decrease ADHD behaviors in 77% of the cases. Similarly, Dexedrine shows improvement rates for 74% and Cylert for 73% of children. Unfortunately, these effects of decreasing dysfunctional behaviors only help for a short time. As soon as the drug loses its effect, the mask of self-control and inattentiveness is removed.

Some animal research suggests psychostimulants increase the dopamine and noradrenaline in the brain; thus, increasing the attention span and helping to control impulsivity,

aggression, and temper tantrums which can, in turn, improve academic performance and peer and adult relations at school, home, and in the broader community. Ritalin has been found to be inappropriate in use of psychiatric problems. Dosages rarely reach beyond 30-40 milligrams per day. Some common side effects which are reported to go away in the first month are: insomnia, headaches, tics, weight loss and loss of appetite. Height and weight should be monitored every six months. Some ADHD children on Ritalin develop a neurologic disorder of tics and vocalizations. If Tourettes Syndrome, which is the emergence of multiple and compulsive utterances and tics (Merck Manual 1987), emerges, it is recommended that Ritalin be discontinued.

The antidepressants imipramine or desipramine have been shown to affect the same neurotransmitters, with the children showing the same improvement of behavior, impulsivity and attention. Parnate is also effective, but children must follow a diet excluding chocolate, cheese and soy sauce.

Cylert is another commonly used stimulant drug which has similar side effects as Dexedrine and Ritalin, but its behavioral improvements are not seen for 14 to 21 days.

Antipsychotics or tranquilizers such as Thorazine, Haldol, Navane, Stelazine, Mellaril and Trifafon should not be given to ADHD children; they do not appear to be effective and can cause neurological disability.

Klein (1987) referring to Cylert, Dexedrine and Ritalin, states, "The stimulants enable better self-control in

adolescents, do not induce euphoria, and are not known to lead to addictive behavior." At times a student tends to resist the medication and is reluctant to take it, leading the collaborative team to facilitate compliance by monitoring and reinforcing the student swallowing his medication.

Klein also reports the Feingold Diet has proven disappointing, and behavior techniques are not effective by themselves. She sees the system of reinforcements and punishment as "threats to their self-esteem." She reports cognitive retraining has no significant impact. She does, however, see a value in family therapy to rebuild relationships and work out the hostility. Klein sees psychostimulants as the treatments of choice and though the main side effects appear to be a slowing of growth, there is not an overall retardation of their potential height.

There is no evidence to support the fear that taking these drugs may produce an addicted person later in life. There are, however, messages which may be left unsaid. At times a parent or school personnel will imply that without the medication he is dumb, bad and trouble, but with the pill he is transformed into a good and smart student. This is unintentionally implied throughout the day when he does something wrong and is asked, "Did you take your pill today?" These messages should be carefully avoided so not to reinforce a link between the behavior and the drug. Instead, reinforce the thought that when he does well it is to his credit; and when he performs poorly, it is his responsibility to improve

his behavior.

These stimulant drugs (Ritalin, Cylert and Dexedrine) help to increase attentiveness and decrease impulsivity. The team may function as a watch dog overseeing the child's progress on the medication. It is important to provide the physician or family with feedback and observe for possible side-effects of increased restlessness, excessive talking, sadness and mood swings, which may alert the doctor to a need for a decreased dosage.

Given the medication's short life in the child's system, it is also important to monitor the afternoon behavior in school and at home as the dosage may need to be taken twice daily rather than once in the morning. A benefit of Ritalin over Cylert is that it can be used on short notice whereas Cylert needs continuous daily use.

One approach alone may not be appropriate for all psychopathologies, but the cognitive-behavioral approach has proven beneficial with ADHD children. Perhaps this is because it treats tangibles that can be specified.

According to Kendall (1985)
"A cognitive behavioral model recognizes the interdependencies of cognitive, affective, social, developmental, and behavioral factors in the etiology and remediation of childhood pathology. The model is concerned with cognitive distortions and deficiencies that surround behavioral events and emphasizes the combination of treatment strategies with the therapist as a remediation organizer." (p.357)

Incorporating the behavioral orientation with problem-solving, attribution and expectations does not leave much room

for the biological, genetic neurological or unconscious aspects; but by reinforcing a learning of skills, it integrates the internal cognitions and the external environment.

The cognitive component of behavioral-contingency therapy has been seen to increase beneficial outcomes more successfully than just behavioral contingency therapy used alone (Kendall & Braswell, 1982).

The medical interventions of psychostimulants have been successful for approximately 70% of ADHD students, though it does not produce a lasting effect, only a mask of self-control.

CHAPTER III

METHODS AND PROCEDURES

PURPOSE

The purpose of this study was to examine general education teachers' attitudes and knowledge of ADHD for three rural public school settings. Specific variables examined were: teachers' attitudes toward ADHD students, teachers' knowledge of ADHD, teachers' gender, teachers' level of education, and teachers' prior experience with diagnosed ADHD students.

Description of Subjects

The subjects for this study were all general education teachers from three school districts in rural Southeastern Lapeer County. Although the entire population consisted of 170 general education teachers, 21 were absent on days the survey was administered, which resulted in 149 participating teachers.

Methods and Procedures

A descriptive research method was used whereby a survey instrument was administered to every general education teacher present at the mandatory staff meetings in Southeastern Lapeer County. The school building principals distributed the survey to all general education teachers at staff meetings and collected these same surveys after completion of the survey, which took approximately fifteen minutes. The researcher was available during these staff meetings to oversee the administration of the survey.

The independent variables for the study were: gender, level of education, and previous experience. The dependent variables were attitude and knowledge.

The null hypotheses for this study were:

Null Hypotheses

- I. There will be no statistically significant difference between males and females on teacher attitudes toward ADHD.
- II. There will be no statistically significant difference between males and females on teacher knowledge of ADHD.
- III. There will be no statistically significant difference between general education teachers who have had prior experience with ADHD students and those who do not have prior experience on attitudes toward ADHD.
- IV. There will be no statistically significant difference between general education teachers who have prior experience with ADHD students and those who do not have prior experience on knowledge of ADHD.
- V. There will be no statistically significant difference between the general education teachers' level of education and their attitude toward ADHD.
- VI. There will be no statistically significant difference between the general education teacher's level of education and their knowledge of ADHD.

Statistical Analysis

The computer program, SPSS/PC+ Studentware (1988), was used to analyze the data. Specific analysis included:

1. Survey subscale means and standard deviations.
2. Student t-Tests.
3. One-way Analysis of Variance with Tukey procedure.

Description of Instrument

The study's survey instrument was modeled after a survey instrument revised by Aksamit, et al. (1987) (See Appendix E). The original survey instruments were designed by the Center for Education of Nontraditional Students at Augsburg College, Minnesota. Both original survey instruments measured college instructors' attitudes and knowledge of learning disabilities. The present survey revisions were made with the permission of Aksamit, et al. The revisions involved changing the LD terminology to ADHD and revising demographic questions to be more applicable to the primary and secondary setting (See Appendix F).

The survey consists of 30 questions divided into two parts. The first eight questions are designed to gather demographic information of the respondent's gender, years of teaching experience, educational level, grade level, familiarity with ADHD, prior experience with suspected or diagnosed ADHD students, and the school building in which they taught. The second section's 22 questions measure the respondent's attitudes and knowledge of ADHD. This second section is divided into 2 subsections: the attitudinal questions are the first 11 questions (9-19), the second subsection's questions (20-30) pertain to the self-reported knowledge level of ADHD.

The 11 attitudinal items assessed general education teachers' attitudes regarding the financing of special services for ADHD students, their comfort level working with ADHD students, feelings regarding adaptations and requirements of the curriculum, and the ADHD student's potential for success.

The 11 knowledge items measured the respondent's knowledge of legislation, characteristics of ADHD for identification purposes, awareness of support services within the schools, and knowledge of educational interventions to employ within the classroom.

The same Likert-type rating used in previous research by Aksamit, et al. was also utilized in this present study. The six point ratings were as follows: strongly agree (1), agree (2), tend to agree (3), tend to disagree (4), disagree (5), and strongly disagree (6). The higher the score, the more positive the response. Statements were worded both positively and negatively to avoid the ease of answering favorably to the survey. The survey was piloted by Aksamit, et al. to establish face and content validity. Cronbach's Alpha Reliability Analysis found a 0.82 coefficient for the knowledge subscale and a 0.86 coefficient for the attitude subscale.

The study's survey was piloted since minor revisions were made by altering LD to ADHD, and by altering demographic information. On October 9, 1992, ten surveys were placed in the school boxes of Dryden Elementary School teachers to

determine whether they would understand the relevance of the questions and be able to adequately complete the survey. All of the surveys were returned the following Monday with no modifications and no suggestions for revising the instrument.

The 22 survey items equally divided into two subsections assessing attitudes and knowledge directly relate to the mandates of Section 504. Section 504 states that handicapped individuals will not be discriminated against in any program which receives federal funds. In addition, handicapped individuals are to be identified, evaluated, and placed in the least restrictive environment. Also, handicapped individuals are to be provided additional instructional materials and any other aides required to provide the individual with the chance to fulfill their maximum potential. Institutions are also required to be accessible to the handicapped individual. To fulfill the mandates of Section 504; the public school will spend more money on the handicapped student, the student will remain present in the general classroom for some of their day and be instructed by the general education teacher. The attitudes of general educators are measured in items 9-19. The respondents are surveyed on their attitudes regarding spending more money on the ADHD student, whether the educator feels comfortable around disabled people and whether the ADHD child is rewarding and enriches the classroom environment.

Section 504 also mandates the identification and evaluation of the potentially handicapped student. The identification and evaluation of the ADHD student requires the

knowledge of the disorder's characteristics. The ability to recognize and an awareness of where to refer the student are crucial in the student's identification. This knowledge is assessed in the second subsection which surveys their knowledge of the disorder's characteristics, the referral and the teachers' ability to accommodate the handicapped student.

CHAPTER IV

RESULTS AND DISCUSSION

The purpose of this study was to examine general education teachers' attitudes and knowledge of ADHD in three rural public school settings. The specific variables investigated were: teachers' attitudes toward ADHD students, teachers' knowledge of ADHD, teachers' gender, teachers' level of education, and teachers' prior experience with diagnosed ADHD students.

The primary questions researched were whether attitudes and knowledge of ADHD were significantly different with respect to respondent demographics of gender, years of education, and prior experience with ADHD students.

The study's survey instrument was modeled by Aksamit, et al., which was revised from a survey developed by the Center for Education of Nontraditional Students at Augsburg College, Minnesota. This researcher made slight modifications of the demographic section to increase its applicability to the community school setting, and altered questions by replacing LD with ADHD for the purpose of this study.

The survey consisted of 30 questions divided into two sections: Demographics and Survey Items. The first section gathered demographic information of the general education teacher such as respondent gender, teaching experience, educational level, teaching level, familiarity with ADHD, teaching experience with suspected and diagnosed ADHD students, and building in which the respondent works. The

second section consisted of 22 questions separated into two equal subsections addressing attitude toward and knowledge of ADHD (see Appendix F).

The survey instrument's attitude subsection assessed attitudes regarding the financing of special services for ADHD students, their comfort level working with ADHD students, feelings regarding adaptations, requirements of the curriculum and the ADHD student's potential for success.

The 11 knowledge items assessed the respondent's knowledge of legislation, characteristics of ADHD for identification purposes, awareness of support services within schools, and knowledge of accommodations to employ within the classroom.

The survey was piloted by Aksamit, et al. to establish face and content validity. Cronbach's Alpha Reliability Coefficient was 0.86 for the attitude subscale and 0.82 for the knowledge subscale. The researcher piloted the survey, after minor revisions were made by altering LD to ADHD and altering demographic information.

The survey was completed and returned by 149 general education teachers from three school districts in rural southeastern Lapeer County. The entire population of general education teachers in the area was 170; however, 21 were absent on the days this survey was administered.

A statistical significance level of .05 was established for rejection of the null hypothesis. The statistical data were analyzed using the SPSS/PC+ Studentware (1988).

Tables 1, 2, 3 and 4 reveal the frequencies and percent for each of the demographics questions. The survey respondents were 25.2% male, 74.1% female and .7% unknown. The results were: 22.4% had less than five years teaching experience; 16.1% had 5-10 years; 16.1% had 11-15 years; 18.9% had 16-20 years; 14.0% had 21-25 years; 10.5% had 21-25 years; and 2.1% were unknown. There were 22.4% at the Bachelor's level, 35.7% at the Bachelor Plus level, 21.7% at the Master's level, and 18.2% at the Master's Plus level, (2.1% were unknown). The respondents were fairly equally divided between primary and secondary teaching levels: 49.7% taught at the primary level, 49.0% taught at the secondary level, and 1.4% were unknown.

TABLE 1
GENDER OF SURVEY RESPONDENTS
FREQUENCY AND PERCENT

ITEM	N	PERCENT
MALE	36	25.2
FEMALE	106	74.1
MISSING	1	.7

TABLE 2
YEARS OF TEACHING EXPERIENCE
FREQUENCY AND PERCENT

ITEM	N	PERCENT
< 5 YEARS	32	22.4
5-10 YEARS	23	16.1
11-15 YEARS	23	16.1
16-20 YEARS	27	18.9
21-25 YEARS	20	14.0
> 25 YEARS	15	10.5
MISSING	3	2.1

TABLE 3
EDUCATIONAL LEVEL OF RESPONDENT
FREQUENCY AND PERCENT

ITEM	N	PERCENT
BACHELOR'S	32	22.4
BACHELOR'S PLUS	51	35.7
MASTER'S	31	21.7
MASTER'S PLUS	26	18.2
MISSING	3	2.1

TABLE 4
TEACHING LEVEL OF RESPONDENT
FREQUENCY AND PERCENT

ITEM	N	PERCENT
PRIMARY	71	49.7
SECONDARY	70	49.0
MISSING	2	1.4

Table 5, revealed that the majority of the respondents were familiar with ADHD. There were 5.6% not familiar with ADHD, 93.0% were familiar and 1.4% were unknown.

TABLE 5
FAMILIARITY WITH ADHD
FREQUENCY AND PERCENT

ITEM	N	PERCENT
NO	8	5.6
YES	133	93.0
MISSING	2	1.4

As shown in Table 6, 95.1% had taught suspected ADHD students, 4.2% had not, and .7% of the respondents skipped the item.

TABLE 6
 TAUGHT STUDENT SUSPECTED OF HAVING ADHD
 FREQUENCY AND PERCENT

ITEM	N	PERCENT
NO	6	4.2
YES	136	95.1
MISSING	1	.7

As shown in Table 7, 83.9% of the respondents had taught a diagnosed ADHD student, which suggests that approximately 11.2% of students are suspected of having ADHD and have not been medically evaluated to determine a diagnosis. Note that this does not mean the teacher has not requested or notified the parent of the problem, rather it means the teacher is not aware that a physician has diagnosed the child ADHD.

TABLE 7
 TAUGHT STUDENT DIAGNOSED AS HAVING ADHD
 FREQUENCY AND PERCENT

ITEM	N	PERCENT
NO	17	11.9
YES	120	83.9
MISSING	6	4.2

TABLE 8
 SCHOOL WHERE RESPONDENT TAUGHT
 FREQUENCY AND PERCENT

ITEM	N	PERCENT
SCHOOL A	28	19.6
SCHOOL B	14	9.8
SCHOOL C	19	13.3
SCHOOL D	13	9.1
SCHOOL E	17	11.9
SCHOOL F	23	16.1
SCHOOL G	29	20.3

Table 9 revealed that the attitude survey items were found to be largely positive with a subscale mean of 4.14, suggesting that, overall, they tended to be positive regarding ADHD students.

TABLE 9
 FREQUENCY, MEAN AND STANDARD DEVIATION FOR EACH
 ATTITUDE ITEM

ITEM	N	MEAN	STANDARD DEVIATION
IT IS UNFAIR TO SPEND MORE MONEY EDUCATING ADHD STUDENTS THAN OTHER STUDENTS	141	3.73	1.26
CLASSROOM ENVIRONMENTS ARE ENRICHED BY THE PRESENCE OF ADHD STUDENTS	138	2.85	1.28
ADHD STUDENTS TEND TO FEEL SORRY FOR THEMSELVES	141	3.99	1.18
I BELIEVE THAT TEACHING ADHD STUDENTS COULD BE VERY REWARDING	142	4.01	1.28
I FEEL UNCOMFORTABLE AROUND DISABLED PEOPLE	143	4.87	1.20
ALL OF US ARE DISABLED TO SOME DEGREE	142	4.35	1.42
ADHD STUDENTS TAKE MORE AWAY FROM SOCIETY THAN THEY GIVE BACK	137	4.33	1.09
FEW ADHD STUDENTS WILL SUCCEED IN COLLEGE	143	4.50	1.06
AN ADHD STUDENT WANTING TO PURSUE A PROFESSIONAL DEGREE SHOULD BE DISCOURAGED FROM DOING SO	143	5.48	.77
HAVING ADHD STUDENTS IN THE CLASSROOM TAKES AWAY FROM THE QUALITY OF EDUCATION OTHER STUDENTS RECEIVE	141	3.60	1.27
IT IS ACCEPTABLE TO SPEND ADDITIONAL FUNDS TO MAKE THIS SCHOOL ASSESSABLE TO ADHD STUDENTS	139	3.84	1.21

Table 10 revealed that the knowledge survey items were found to have a subscale mean of 3.95, suggesting that the respondents tended to agree with statements questioning whether they are knowledgeable.

TABLE 10
 FREQUENCY, MEAN AND STANDARD DEVIATION FOR EACH
 KNOWLEDGE ITEM

ITEM	N	MEAN	STANDARD DEVIATION
ADHD STUDENTS ARE OFTEN PERCEIVED AS IRRESPONSIBLE WHEN, IN REALITY, THE PROBLEM MAY BE A RESULT OF POOR ORGANIZATION	141	4.39	1.13
IMPULSIVITY AND POOR PEER RELATIONS ARE FREQUENT PROBLEMS FACED BY ADHD STUDENTS	141	4.71	1.01
THIS SCHOOL HAS SPECIAL PROGRAMS FOR ADHD STUDENTS	138	2.75	1.21
POOR ACADEMIC PERFORMANCE OF ADHD STUDENTS IS MOST LIKELY A RESULT OF STUDY HABITS	141	3.30	1.18
I CAN RECOGNIZE AN ADHD STUDENT	139	3.98	.96
I KNOW <u>WHEN</u> TO PROVIDE ASSISTANCE TO ADHD STUDENTS IN MY CLASS	140	3.62	.90
AN ADAPTED EDUCATION PROGRAM FOR ADHD STUDENTS MAY NOT ELIMINATE ACADEMIC FAILURE	140	3.96	1.00
I KNOW <u>HOW</u> TO OFFER ASSISTANCE TO ADHD STUDENTS IN MY CLASS	140	3.60	.94
I KNOW WHERE TO REFER ADHD STUDENTS FOR HELP AT THIS DISTRICT	141	3.89	1.37
ADHD STUDENTS ARE PROTECTED FROM DISCRIMINATORY EDUCATIONAL PRACTICES BY FEDERAL LAW	134	4.40	1.14
ADHD STUDENTS WITH POOR GRADES ARE OFTEN DISORGANIZED; HAVE DIFFICULTY COMPLETING HOMEWORK	143	4.86	1.13

Null Hypothesis I: There will be no statistically significant difference between males and females on teacher attitudes of ADHD. Survey items numbered 9-19 examined the attitudes of the respondent. Table 11 shows that six of these 11 items were found to be significant at the .05 level when the t-test was employed in analyzing the gender of the respondent. The attitudes found to be significantly different between males and females were survey items 10, 12, 15, 16, 17, 18. Females answered with a more positive attitude than males on all of those six items regarding whether the ADHD student would: enrich the classroom, be rewarding to teach, not take away from society, succeed in college, be encouraged to pursue a professional degree, and not take away from the quality of education in the classroom.

TABLE 11
t-TEST RESULTS FOR GENDER BY ATTITUDE ITEM

ITEM	GENDER	N	MEAN	SD	SE	SVE/2- T.PROB.
IT IS UNFAIR TO SPEND MORE MONEY EDUCATING ADHD STUDENTS THAN OTHER STUDENTS	MALE	36	3.6111	1.358	.226	}.492
	FEMALE	104	3.7885	1.228	.120	
CLASSROOM ENVIRONMENTS ARE ENRICHED BY THE PRESENCE OF ADHD STUDENTS	MALE	35	2.2571	1.146	.194	}.001*
	FEMALE	102	3.0686	1.261	.125	
ADHD STUDENTS TEND TO FEEL SORRY FOR THEMSELVES	MALE	34	3.8529	1.132	.194	}.418
	FEMALE	106	4.0377	1.203	.117	
I BELIEVE THAT TEACHING ADHD STUDENTS COULD BE VERY REWARDING	MALE	36	3.5833	1.317	.220	}.025*
	FEMALE	105	4.1619	1.249	.122	
I FEEL UNCOMFORTABLE AROUND DISABLED PEOPLE	MALE	36	4.7500	.937	.156	.147
	FEMALE	106	4.9057	1.276	.124	.437
ALL OF US ARE DISABLED TO SOME DEGREE	MALE	36	4.2778	1.323	.220	}.696
	FEMALE	105	4.3810	1.464	.143	
ADHD STUDENTS TAKE MORE AWAY FROM SOCIETY THAN THEY GIVE BACK	MALE	32	3.9063	1.174	.208	}.023*
	FEMALE	104	4.4519	1.042	.102	
FEW ADHD STUDENTS WILL SUCCEED IN COLLEGE	MALE	36	4.1677	.878	.146	}.014*
	FEMALE	106	4.6226	1.091	.106	
AN ADHD STUDENT WANTING TO PURSUE A PROFESSIONAL DEGREE SHOULD BE DISCOURAGED FROM DOING SO	MALE	36	5.2222	.898	.150	}.047*
	FEMALE	106	5.5566	.705	.068	
HAVING ADHD STUDENTS IN THE CLASSROOM TAKES AWAY FROM THE QUALITY OF EDUCATION OTHER STUDENTS RECEIVE	MALE	36	3.1389	1.073	.179	}.008*
	FEMALE	104	3.7404	1.300	.127	
IT IS ACCEPTABLE TO SPEND ADDITIONAL FUNDS TO MAKE THIS SCHOOL SCHOOL ASSESSABLE TO ADHD STUDENTS	MALE	35	3.6000	1.168	.197	}.131
	FEMALE	103	3.9515	1.183	.117	

* $p \leq .05$

Null Hypothesis II: There will be no statistical difference between males and females on teacher knowledge of ADHD. Survey item numbers 20-30 examined the knowledge of the respondent. Table 12 reveals that five of the 11 items were found to be significant at the .05 level when the t-test was employed to analyze the gender of the respondent in relation to their knowledge. The knowledge items found to be significantly different between males and females were items 20, 21, 22, 24, and 25. Females answered with greater knowledge on four of the five items found to be significantly different. Males were more aware of special programs offered in the district while females had a greater understanding of how to recognize and help ADHD students in their classrooms.

TABLE 12
t-TEST RESULTS FOR GENDER BY KNOWLEDGE ITEM

ITEM	GENDER	N	MEAN	SD	SE	SVE/2- T.PROB.
ADHD STUDENTS ARE OFTEN PERCEIVED AS IRRESPONSIBLE WHEN, IN REALITY, THE PROBLEM MAY BE A RESULT OF POOR ORGANIZATION	MALE	35	4.1143	.867	.147	}.039*
	FEMALE	105	4.5048	1.178	.115	
IMPULSIVITY AND POOR PEER RELATIONS ARE FREQUENT PROBLEMS FACED BY ADHD STUDENTS	MALE	36	4.4167	1.025	.171	}.046*
	FEMALE	104	4.8173	.993	.097	
THIS SCHOOL HAS SPECIAL PROGRAMS FOR ADHD STUDENTS	MALE	33	3.1818	1.211	.211	}.020*
	FEMALE	104	2.6058	1.186	.116	
POOR ACADEMIC PERFORMANCE OF ADHD STUDENTS IS MOST LIKELY A RESULT OF STUDY HABITS	MALE	35	3.3143	.993	.168	}.927
	FEMALE	105	3.2952	1.247	.122	
I CAN RECOGNIZE AN ADHD STUDENT	MALE	36	3.4444	.969	.162	}.000*
	FEMALE	102	4.1765	.883	.087	
I KNOW WHEN TO PROVIDE ASSISTANCE TO ADHD STUDENTS IN MY CLASS	MALE	36	3.2778	1.003	.167	}.017*
	FEMALE	103	3.7379	.840	.083	
AN ADAPTED EDUCATION PROGRAM FOR ADHD STUDENTS MAY NOT ELIMINATE ACADEMIC FAILURE	MALE	35	4.0571	.968	.164	}.425
	FEMALE	104	3.9038	1.000	.098	
I KNOW HOW TO OFFER ASSISTANCE TO ADHD STUDENTS IN MY CLASS	MALE	35	3.5714	.948	.160	}.854
	FEMALE	104	3.6058	.949	.093	
I KNOW WHERE TO REFER ADHD STUDENTS FOR HELP AT THIS DISTRICT	MALE	36	4.1111	1.116	.186	}.199
	FEMALE	104	3.8077	1.455	.143	
ADHD STUDENTS ARE PROTECTED FROM DISCRIMINATORY EDUCATIONAL PRACTICES BY FEDERAL LAW	MALE	33	4.4141	.902	.157	}.864
	FEMALE	100	4.3900	1.222	.122	
ADHD STUDENTS WITH POOR GRADES ARE OFTEN DISORGANIZED; HAVE DIFFICULTY COMPLETING HOMEWORK	MALE	36	4.6389	.961	.160	}.138
	FEMALE	106	4.9340	1.181	.115	

*p< .05

Hypothesis III: There will be no statistically significant difference between general education teachers who have had prior experience with ADHD students and those who do not have prior experience on attitudes toward ADHD students. Table 13 reveals that two of the 11 items had shown a significant difference between the respondent's prior experience and their attitudes toward ADHD students. Those that had prior experience with diagnosed ADHD students were found to feel less negative about the statement "ADHD students take more away from society than they give back" and the statement "few ADHD students will succeed in college."

TABLE 13

t-TEST RESULTS FOR PRIOR EXPERIENCE BY ATTITUDE ITEM

ITEM	PRIOR EXP.	N	MEAN	SD	SE	SVE/2- T.PROB.
IT IS UNFAIR TO SPEND MORE MONEY EDUCATING ADHD STUDENTS THAN OTHER STUDENTS	NO	17	3.5294	1.328	.322	}.429
	YES	118	3.8051	1.242	.114	
CLASSROOM ENVIRONMENTS ARE ENRICHED BY THE PRESENCE OF ADHD STUDENTS	NO	14	2.5000	.941	.251	}.122
	YES	119	2.9496	1.301	.119	
ADHD STUDENTS TEND TO FEEL SORRY FOR THEMSELVES	NO	17	3.8824	1.054	.256	}.656
	YES	119	4.0084	1.218	.112	
I BELIEVE THAT TEACHING ADHD STUDENTS COULD BE VERY REWARDING	NO	17	3.4706	1.328	.322	}.073
	YES	119	4.1176	1.277	.117	
I FEEL UNCOMFORTABLE AROUND DISABLED PEOPLE	NO	17	5.0000	1.000	.243	}.581
	YES	120	4.8500	1.248	.114	
ALL OF US ARE DISABLED TO SOME DEGREE	NO	17	3.9412	1.144	.277	}.114
	YES	119	4.4454	1.430	.131	
ADHD STUDENTS TAKE MORE AWAY FROM SOCIETY THAN THEY GIVE BACK	NO	16	3.8750	.806	.202	}.023*
	YES	116	4.4224	1.089	.101	
FEW ADHD STUDENTS WILL SUCCEED IN COLLEGE	NO	17	3.7059	.588	.143	}.000*
	YES	120	4.6333	1.069	.098	
AN ADHD STUDENT WANTING TO PURSUE A PROFESSIONAL DEGREE SHOULD BE DISCOURAGED FROM DOING SO	NO	17	5.4118	.795	.193	}.672
	YES	120	5.5000	.767	.070	
HAVING ADHD STUDENTS IN THE CLASSROOM TAKES AWAY FROM THE QUALITY OF EDUCATION OTHER STUDENTS RECEIVE	NO	17	3.3529	.931	.226	}.274
	YES	119	3.6387	1.307	.120	
IT IS ACCEPTABLE TO SPEND ADDITIONAL FUNDS TO MAKE THIS SCHOOL ASSESSABLE TO ADHD STUDENTS	NO	17	3.5882	1.121	.272	}.244
	YES	116	3.9397	1.182	.110	

*p \leq .05

Null Hypothesis IV: There will be no statistically significant difference between general education teachers who have prior experience with ADHD students and those who do not have prior experience on knowledge of ADHD. Table 14 reveals that two items of the 11 knowledge questions showed a significant difference between the respondents' prior experience with diagnosed ADHD students and their knowledge. These items were: I can recognize an ADHD student and I know when to provide assistance to ADHD students in my class.

TABLE 14
t-TEST RESULTS FOR PRIOR EXPERIENCE BY KNOWLEDGE ITEM

ITEM	PRIOR EXP.	N	MEAN	SD	SE	SVE/2- T.PROB.
ADHD STUDENTS ARE OFTEN PERCEIVED AS IRRESPONSIBLE WHEN, IN REALITY, THE PROBLEM MAY BE A RESULT OF POOR ORGANIZATION	NO	17	4.0000	1.000	.243	}.071
	YES	118	4.5000	1.123	.103	
IMPULSIVITY AND POOR PEER RELATIONS ARE FREQUENT PROBLEMS FACED BY ADHD STUDENTS	NO	17	4.3529	.996	.242	}.121
	YES	118	4.7712	1.016	.094	
THIS SCHOOL HAS SPECIAL PROGRAMS FOR ADHD STUDENTS	NO	16	2.9375	1.237	.309	}.533
	YES	118	2.7288	1.224	.113	
POOR ACADEMIC PERFORMANCE OF ADHD STUDENTS IS MOST LIKELY A RESULT OF STUDY HABITS	NO	17	3.4706	.717	.174	}.388
	YES	118	3.2881	1.248	.115	
I CAN RECOGNIZE AN ADHD STUDENT	NO	17	3.5294	.717	.174	}.009*
	YES	116	4.0776	.952	.088	
I KNOW <u>WHEN</u> TO PROVIDE ASSISTANCE TO ADHD STUDENTS IN MY CLASS	NO	17	3.1765	.809	.196	}.018*
	YES	117	3.7179	.879	.081	
AN ADAPTED EDUCATION PROGRAM FOR ADHD STUDENTS MAY NOT ELIMINATE ACADEMIC FAILURE	NO	17	4.0588	.899	.218	}.549
	YES	117	3.9145	1.005	.093	
I KNOW <u>HOW</u> TO OFFER ASSISTANCE TO ADHD STUDENTS IN MY CLASS	NO	17	3.3529	.702	.170	}.111
	YES	118	3.6695	.952	.088	
I KNOW WHERE TO REFER ADHD STUDENTS FOR HELP AT THIS DISTRICT	NO	17	3.6471	1.320	.320	}.445
	YES	118	3.9153	1.381	.127	
ADHD STUDENTS ARE PROTECTED FROM DISCRIMINATORY EDUCATIONAL PRACTICES BY FEDERAL LAW	NO	16	4.3750	.719	.180	}.849
	YES	113	4.4159	1.208	.114	
ADHD STUDENTS WITH POOR GRADES ARE OFTEN DISORGANIZED; HAVE DIFFICULTY COMPLETING HOMEWORK	NO	17	4.4118	1.064	.258	}.084
	YES	120	4.9167	1.149	.105	

* $p \leq .05$

Null Hypothesis V: There will be no statistically significant difference between the general education teachers' level of education and their attitude of ADHD. This hypothesis was not rejected at the .05 level. No statistically significant difference was found between Bachelor's level and Master's level teachers utilizing the t-test as seen in Table 15.

TABLE 15
t-TEST RESULTS FOR EDUCATIONAL
LEVEL BY ATTITUDE ITEM

ITEM	EDUCATIONAL LEVEL	N	MEAN	SD	SE	SVE/2- T.PROB.
IT IS UNFAIR TO SPEND MORE MONEY EDUCATING ADHD STUDENTS THAN OTHER STUDENTS	BACHELOR	81	3.8395	1.299	.144	}.461
	MASTER	57	3.6842	1.152	.153	
CLASSROOM ENVIRONMENTS ARE ENRICHED BY THE PRESENCE OF ADHD STUDENTS	BACHELOR	78	3.0128	1.253	.142	}.187
	MASTER	57	2.7193	1.278	.169	
ADHD STUDENTS TEND TO FEEL SORRY FOR THEMSELVES	BACHELOR	82	3.9268	1.265	.140	}.417
	MASTER	56	4.0893	1.066	.143	
I BELIEVE THAT TEACHING ADHD STUDENTS COULD BE VERY REWARDING	BACHELOR	83	4.1446	1.308	.144	}.165
	MASTER	56	3.8393	1.233	.165	
I FEEL UNCOMFORTABLE AROUND DISABLED PEOPLE	BACHELOR	83	4.7711	1.291	.142	}.255
	MASTER	57	5.0000	1.069	.142	
ALL OF US ARE DISABLED TO SOME DEGREE	BACHELOR	82	4.3415	1.459	.161	}.744
	MASTER	57	4.4211	1.375	.182	
ADHD STUDENTS TAKE MORE AWAY FROM SOCIETY THAN THEY GIVE BACK	BACHELOR	80	4.4500	1.090	.122	}.193
	MASTER	54	4.2037	1.053	.143	
FEW ADHD STUDENTS WILL SUCCEED IN COLLEGE	BACHELOR	83	4.4699	1.172	.129	}.600
	MASTER	57	4.5614	.887	.117	
AN ADHD STUDENT WANTING TO PURSUE A PROFESSIONAL DEGREE SHOULD BE DISCOURAGED FROM DOING SO	BACHELOR	83	5.5301	.801	.088	}.216
	MASTER	57	5.3684	.723	.096	
HAVING ADHD STUDENTS IN THE CLASSROOM TAKES AWAY FROM THE QUALITY OF EDUCATION OTHER STUDENTS RECEIVE	BACHELOR	81	3.7531	1.365	.152	}.109
	MASTER	57	3.4211	1.051	.139	
IT IS ACCEPTABLE TO SPEND ADDITIONAL FUNDS TO MAKE THIS SCHOOL ASSESSABLE TO ADHD STUDENTS	BACHELOR	81	3.7901	1.301	.145	.145
	MASTER	56	3.9821	1.000	.134	.331

*p ≤ .05

Null Hypothesis VI: There will be no statistically significant difference between general education teachers' level of education and their knowledge of ADHD. This hypothesis was not rejected at the .05 level. No statistically significant difference was found between Bachelor's and Master's level teachers utilizing the t-test as seen in Table 16.

TABLE 16
t-TEST RESULTS FOR
EDUCATIONAL LEVEL BY KNOWLEDGE ITEM

ITEM	EDUCATIONAL LEVEL	N	MEAN	SD	SE	SVE/2-T.PROB.
ADHD STUDENTS ARE OFTEN PERCEIVED AS IRRESPONSIBLE WHEN, IN REALITY, THE PROBLEM MAY BE A RESULT OF POOR ORGANIZATION	BACHELOR	83	4.3494	1.214	.133	}.452
	MASTER	55	4.4909	.979	.132	
IMPULSIVITY AND POOR PEER RELATIONS ARE FREQUENT PROBLEMS FACED BY ADHD STUDENTS	BACHELOR	81	4.6173	1.113	.124	}.254
	MASTER	57	4.8070	.833	.110	
THIS SCHOOL HAS SPECIAL PROGRAMS FOR ADHD STUDENTS	BACHELOR	80	2.6500	1.126	.126	}.348
	MASTER	55	2.8545	1.311	.177	
POOR ACADEMIC PERFORMANCE OF ADHD STUDENTS IS MOST LIKELY A RESULT OF STUDY HABITS	BACHELOR	81	3.3210	1.263	.140	}.510
	MASTER	57	3.1930	1.008	.133	
I CAN RECOGNIZE AN ADHD STUDENT	BACHELOR	80	3.9750	.941	.105	}.879
	MASTER	56	4.0000	.934	.125	
I KNOW <u>WHEN</u> TO PROVIDE ASSISTANCE TO ADHD STUDENTS IN MY CLASS	BACHELOR	80	3.6375	.815	.091	}.562
	MASTER	57	3.5439	1.001	.132	
AN ADAPTED EDUCATION PROGRAM FOR ADHD STUDENTS MAY NOT ELIMINATE ACADEMIC FAILURE	BACHELOR	81	3.8765	.992	.110	}.416
	MASTER	56	4.0179	1.000	.134	
I KNOW <u>HOW</u> TO REFER ADHD STUDENTS FOR HELP AT THIS DISTRICT	BACHELOR	82	3.6951	.842	.093	}.109
	MASTER	55	3.4182	1.066	.144	
I KNOW WHERE TO REFER ADHD STUDENTS FOR HELP AT THIS DISTRICT	BACHELOR	82	3.7561	1.419	.157	}.156
	MASTER	56	4.0893	1.297	.173	
ADHD STUDENTS ARE PROTECTED FROM DISCRIMINATORY PRACTICES BY FEDERAL LAW	BACHELOR	79	4.2911	1.232	.139	}.247
	MASTER	52	4.5192	1.000	.139	
ADHD STUDENTS WITH POOR GRADES ARE OFTEN DISORGANIZED; HAVE DIFFICULTY COMPLETING HOMEWORK	BACHELOR	83	4.7952	1.217	.134	}.479
	MASTER	57	4.9298	1.015	.134	

*p ≤ .05

However, when the educational levels were disaggregated into four groups (Bachelor's, Bachelor's Plus, Master's, Master's Plus) one significant difference at the .05 level was found using a one-way analysis of variance and the Tukey procedure. The significant difference was found between Group 2 (Bachelor's Plus) and Group 3 (Master's) in regards to attitude survey item 17. As shown by Table 17, those respondents with a master's level of education agreed that an ADHD student wanting to pursue a professional degree should be discouraged from doing so more than the Bachelor Plus group did. The remaining ten items were not significantly different at the .05 level.

TABLE 17
ONEWAY ANOVA FOR LEVEL OF EDUCATION BY ATTITUDE ITEM

SOURCE	DF	SS	MS	F RATIO	F PROB.
BETWEEN GROUPS	3	5.60	1.86	3.2927	.0226*
WITHIN GROUPS	136	77.21	.5677		
TOTAL	139	82.82			

* $p \leq .05$

A significant difference at the .05 level was found between Group 3 (Master's) and Group 4 (Master's Plus) with regard to their knowledge of how to provide help to an ADHD

student. Those respondents with a Master's Plus were more knowledgeable as seen by Table 18.

TABLE 18
ONEWAY ANOVA FOR LEVEL OF EDUCATION BY KNOWLEDGE ITEM

SOURCE	DF	SS	MS	F RATIO	F PROB.
BETWEEN GROUPS	3	6.00	2.00	2.58	.05*
WITHIN GROUPS	133	102.91	.77		
TOTAL	136	108.91			

* $p \leq .05$

Three attitudinal survey items were found to have a significant difference between primary and secondary general educators. Primary educators, grades K-8, were found to have more positive attitudes toward spending more money to educate ADHD students. Also, primary educators were less likely to agree that ADHD students take more away from society than they give back, and that they should be discouraged from pursuing a professional degree.

Summary of Hypothesis Testing

The null hypotheses were analyzed using several statistical methods: t-tests, one-way analysis of variance, and the Tukey procedure. The analysis of the results are summarized as follows:

Null Hypothesis I: There will be no statistically

significant difference between males and females on teacher attitudes of ADHD.

This hypothesis was rejected at the .05 level since six of the 11 attitude items were found to be significantly different for males and females. Female teachers answered with a more positive attitude toward ADHD students in all six of the items found to be significantly different.

Null Hypothesis II: There will be no statistically significant difference between males and females on teacher knowledge of ADHD.

This hypothesis was rejected for five of the 11 knowledge subscale items which were found to be significantly different based on the t-test results at the .05 level. Female teachers answered with greater knowledge on four of the five items found to be significantly different.

Null Hypothesis III: There will be no statistically significant difference between general education teachers who have prior experience with ADHD students and those who do not have prior experience on attitudes toward ADHD.

This hypothesis was rejected for two of the 11 attitudinal items. The general education teachers that had prior experience with diagnosed ADHD students had significantly greater positive attitudes on these two items than did teachers who had not taught a diagnosed ADHD student.

Null Hypothesis IV: There will be no statistically significant difference between general education teachers who have prior experience with ADHD students and those who do not

have prior experience on knowledge of ADHD.

This hypothesis was rejected for two of the 11 questions addressing knowledge. The two knowledge items were responded to differently by those who had prior experience with diagnosed ADHD students and those who did not have prior experience. Those general education teachers who had prior experience with a diagnosed ADHD student reported to have greater knowledge of ADHD student identification and in knowledge of ADHD interventions.

Null Hypothesis V: There will be no statistically significant difference between the general education teachers' level of education and their attitude of ADHD.

This hypothesis was not rejected at the .05 level after conducting the t-test. However, after conducting a one-way ANOVA, and using Tukey's procedure, a significant difference was found between the Master's level teachers and the Master's Plus teachers. Those educators with a Master's Plus were more positive in their attitude regarding whether an ADHD student should be discouraged from pursuing a professional degree. The Master Plus educators answered with a greater positive attitude toward ADHD students pursuing professional degrees than the Master level educators.

Null Hypothesis VI: There will be no statistically significant difference between general education teachers' level of education and their knowledge of ADHD.

This hypothesis was not rejected at the .05 level after conducting the t-test; however, after the one-way analysis of

variance and Tukey procedure were performed, the hypothesis was rejected at the .05 level for level of education and teacher knowledge of ADHD. Master's Plus level general education teachers reported greater knowledge determining when to provide assistance to ADHD students in their class.

CHAPTER V

CONCLUSIONS AND RECOMMENDATION

The purpose of this study was to examine general education teachers' attitudes and knowledge of ADHD in three rural public school settings. The attitudes and knowledge subscales of the survey designed by Aksamit, et. al. (see Appendix A) was used to determine differences between the attitudes and knowledge and the respondent demographics of teachers' gender, level of education and whether they had taught a diagnosed ADHD student in the past.

One hundred and forty-nine general education teachers completed the survey from three school districts.

Conclusions

The study found statistically significant differences between some of the general educators attitudes and their knowledge of ADHD and the teachers' demographics of gender, prior experience and level of education.

The gender of the teacher was found to be a significant factor in the positive attitude of a teacher toward an ADHD student. Female respondents felt significantly more positive. Female teachers responded with greater positive attitude on whether an ADHD student: would enrich the classroom, was rewarding to teach, did not take away from society, would succeed in college, shouldn't be discouraged from pursuing a professional degree and would not take away from the quality of education in the classroom.

The gender of the teacher was also found to be a

significant factor in the amount of knowledge of ADHD students. Females reported greater knowledge on four (20, 21, 24 and 25) of the five items found significant. Females reported a greater understanding of characteristics of ADHD students and when interventions should be used with ADHD students while men reported greater awareness of the special programs offered in the district.

Prior experience with diagnosed ADHD students was also a significant factor in the degree of positive attitude. Those with prior experience felt less negative about an ADHD student's contribution to society and their ability to succeed in college.

Prior experience with diagnosed ADHD students was also a significant factor in the degree of knowledge of ADHD. Those teachers with prior experience with ADHD students reported greater knowledge in the identification and intervention of ADHD students.

The teachers' level of education was determined to be a significant factor in the degree of positive attitudes. Those educators with a Master's degree had greater positive attitudes toward ADHD students pursuing a professional degree.

The teachers' level of education was also determined to be a significant factor in the degree of reported knowledge of ADHD. The Master's Plus reported greater knowledge of interventions for ADHD students than the Master's level teachers.

Section 504 of the American Disabilities Act of 1973

mandates that potentially handicapped students are identified, assessed and accommodated in the general education classroom. To do this a teacher needs a positive attitude toward these students and a knowledge base from which to identify and accommodate these students. This research found that 95.1% of the teachers reported they suspected they had taught an ADHD student in the past; 83.9% reported having taught diagnosed ADHD students. In spite of a high percent of those with prior experience, the attitude subscale mean of 4.14 and a knowledge subscale mean of 3.95 suggested limited knowledge and positive attitude for the teachers dealing with ADHD students in the general classroom.

Utilizing a cut-off mean of 3.5, the teachers felt negative regarding survey item ten. As a whole, teachers didn't feel that classroom environments were enriched by the presence of ADHD students. In regards to deficits in the teachers' knowledge, items 22 and 23 were in the negative range. On Item 22, teachers were unaware of special programs for ADHD students as is reflected in a mean of 2.75, and on Item 23 they were not aware of the relationship between an ADHD students' poor study habits and their poor academic performance as is reflected in a mean of 3.30.

Recommendations

The findings revealed the need for staff development for general education teachers. The study also pinpointed the particular items that may indicate a need for an additional emphasis. These items include: increasing teachers' knowledge

of special programs for ADHD students; and the relationship between poor study habits and the student's poor academic performance.

It would appear there is a need to determine what methods of staff development are effective at increasing positive and decreasing negative attitudes toward ADHD students.

In addition to determining effective staff development strategies to increase attitudes, further research should also explore methods to increase knowledge regarding the education of ADHD students.

If continuing research studies are able to find effective methods to increase positive teacher attitudes and knowledge, it is also important that teachers be provided the various resources needed to implement the improvements in the education of the ADHD student.

APPENDICIES

APPENDIX A

R 340.1713 "Specific learning disability" defined; determination.

Rule 13.(1) "Specific learning disability" means a disorder in 1 or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain disfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, of emotional disturbance, of autism, or of environmental, cultural, or economic disadvantage.

(2) The individualized educational planning committee may determine that a child has a specific learning disability if the child does not achieve commensurate with his or her age and ability levels in 1 or more of the areas listed in this subrule, when provided with learning experiences appropriate for the child's age and ability levels, and if the multidisciplinary evaluation team finds that a child has a severe discrepancy between achievement and intellectual ability in 1 or more of the following areas:

- (a) Oral expression.
- (b) Listening comprehension.
- (c) Written expression.
- (d) Basic reading skill.
- (e) Reading comprehension.
- (f) Mathematics calculation.
- (g) Mathematics reasoning.

(3) The individualized educational planning committee shall not identify a child as having a specific learning disability if the severe discrepancy between ability and achievement is primarily the result of any of the following:

- (a) A visual, hearing, or motor handicap.
- (b) Mental retardation.
- (c) Emotional disturbance.
- (d) Autism.
- (e) Environmental, cultural, or economic disadvantage.

(4) A determination of impairment shall be based upon a comprehensive evaluation by a multidisciplinary evaluation team, which shall include at least both of the following:

(a) The child's regular teacher or, if the child does not have a regular teacher, a regular classroom teacher qualified to teach a child of his or her age, or, for a child of less than school age, an individual qualified by the state educational agency to teach a child of his or her age.

(b) At least 1 person qualified to conduct individual diagnostic examinations of children, such as a school psychologist, a teacher of speech and language impaired, or a teacher consultant.

APPENDIX B

R 340.1706 Determination of emotionally impaired.

Rule 6.(1) The emotionally impaired shall be determined through manifestation of behavioral problems primarily in the affective domain, over an extended period of time, which adversely affect the persons' education to the extent that the person cannot profit from regular learning experiences without special education support. The problems result in behaviors manifested by 1 or more of the following characteristics:

- (a) Inability to build or maintain satisfactory interpersonal relationships within the school environment.
- (b) Inappropriate types of behavior or feelings under normal circumstances.
- (c) General pervasive mood of unhappiness or depression.
- (d) Tendency to develop physical symptoms or fears associated with personal or school problems.

(2) The term "emotionally impaired" also includes persons who, in addition to the above characteristics, exhibit maladaptive behaviors related to schizophrenia or similar disorders. The term "emotionally impaired" does not include persons who are socially maladjusted, unless it is determined that such persons are emotionally impaired.

(3) The emotionally impaired shall not include persons whose behaviors are primarily the result of intellectual, sensory, or health factors.

(4) A determination of impairment shall be based on data provided by a multidisciplinary team, which shall include a comprehensive evaluation by both of the following:

- (a) A psychologist or psychiatrist.
- (b) A school social worker.

(5) A determination of impairment shall not be based solely on behaviors relating to environmental, cultural, or economic differences.

APPENDIX C

R 340.1709 Determination of physically and otherwise health impaired.

Rule 9.(1) The physically and otherwise health impaired shall be determined through the manifestation of a physical or other health impairment which adversely affects educational performance and which may require physical adaptations within the school environment.

(2) Determination of impairment shall be based upon a comprehensive evaluation by a multidisciplinary evaluation team, which shall include 1 of the following:

- (a) An orthopedic surgeon.
- (b) An internist.
- (c) A neurologist.
- (d) A pediatrician.
- (e) Any other approved physician as defined in Act No. 368 of the Public Acts of 1978, as amended, being SS. 333.1101 et seq. of the Michigan Compiled Laws.

(3) A determination of impairment shall not be based solely on behaviors relating to environmental, cultural, or economic differences.

APPENDIX D

**PART 104—NONDISCRIMINATION ON
THE BASIS OF HANDICAP IN
PROGRAMS AND ACTIVITIES
RECEIVING OR BENEFITING FROM
FEDERAL FINANCIAL ASSISTANCE**

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Subpart B—Employment Practices

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 104.54 Education of institutionalized persons.
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Subpart G—Procedures

- 104.61 Procedures.
 104.62-104.99 (Reserved)
 Appendix A—Analysis of Final Regulation.
 Appendix B—Guidelines for eliminating discrimination and denial of services on the basis of race, color, national origin, sex, and handicap in vocational education programs.
 Authority: Sec. 504, Rehabilitation Act of 1973, Pub. L. 93-112, 87 Stat. 394 (29 U.S.C. 794), and 114(a), Rehabilitation Act Amendments of 1974, Pub. L. 93-518, 88 Stat. 2919 (29 U.S.C. 706); sec. 606, Education of the Handicapped Act (20 U.S.C. 1405), as amended by Pub. L. 94-142, 89 Stat. 768.

Subpart A—General Provisions**§ 104.1 Purpose.**

The purpose of this part is to effectuate section 504 of the Rehabilitation Act of 1973, which is designed to eliminate discrimination on the basis of handicap in any program or activity receiving Federal financial assistance.

§ 104.2 Application.

This part applies to each recipient of Federal financial assistance from the Department of Education and to each program or activity that receives or benefits from such assistance.

§ 104.3 Definitions.

As used in this part, the term:

- (a) "The Act" means the Rehabilitation Act of 1973, Pub. L. 93-112, as amended by the Rehabilitation Act Amendments of 1974, Pub. L. 93-518, 29 U.S.C. 706.
 (b) "Section 504" means section 504 of the Act.
 (c) "Education of the Handicapped Act" means that statute as amended by the Education for all Handicapped Children Act of 1975, Pub. L. 94-142, 20 U.S.C. 1401 et seq.
 (d) "Department" means the Department of Education.

(e) "Assistant Secretary" means the Assistant Secretary for Civil Rights of the Department of Education.

(f) "Recipient" means any state or its political subdivision, any instrumentalality of a state or its political subdivision, any public or private agency, institution, organization, or other entity, or any person to which Federal financial assistance is extended directly or through another recipient, including any successor, assignee, or transferee of a recipient, but excluding the ultimate beneficiary of the assistance.

(g) "Applicant for assistance" means one who submits an application, request, or plan required to be approved by a Department official or by a recipient as a condition to becoming a recipient.

(h) "Federal financial assistance" means any grant, loan, contract (other than a procurement contract or a contract of insurance or guaranty), or any other arrangement by which the Department provides or otherwise makes available assistance in the form of:

- (1) Funds;
- (2) Services of Federal personnel; or
- (3) Real and personal property or any interest in or use of such property, including:

(i) Transfers or leases of such property for less than fair market value or for reduced consideration; and
 (ii) Proceeds from a subsequent transfer or lease of such property if the Federal share of its fair market value is not returned to the Federal Government.

(i) "Facility" means all or any portion of buildings, structures, equipment, roads, walks, parking lots, or other real or personal property or interest in such property.

(j) "Handicapped person." (1) "Handicapped persons" means any person who (i) has a physical or mental impairment which substantially limits one or more major life activities, (ii) has a record of such an impairment, or (iii) is regarded as having such an impairment.

(2) As used in paragraph (j)(1) of this section, the phrase:

(i) "Physical or mental impairment" means (A) any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological; musculoskeletal; special sense organs; respiratory, including speech organs; cardiovascular; reproductive, digestive, genito-urinary; hemic and lymphatic; skin; and endocrine; or (B) any mental or psychological disorder, such as mental retardation, organic brain syndrome,

emotional or mental illness, and specific learning disabilities.

(ii) "Major life activities" means functions such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working.

(iii) "Has a record of such an impairment" means has a history of, or has been misclassified as having, a mental or physical impairment that substantially limits one or more major life activities.

(iv) "Is regarded as having an impairment" means (A) has a physical or mental impairment that does not substantially limit major life activities but that is treated by a recipient as constituting such a limitation; (B) has a physical or mental impairment that substantially limits major life activities only as a result of the attitudes of others toward such impairment; or (C) has none of the impairments defined in paragraph (j)(2)(i) of this section but is treated by a recipient as having such an impairment.

(k) "Qualified handicapped person" means:

(1) With respect to employment, a handicapped person who, with reasonable accommodation, can perform the essential functions of the job in question;

(2) With respect to public preschool, elementary, secondary, or adult educational services, a handicapped person (i) of an age during which nonhandicapped persons are provided such services, (ii) of any age during which it is mandatory under state law to provide such services to handicapped persons, or (iii) to whom a state is required to provide a free appropriate public education under § 612 of the Education of the Handicapped Act; and

(3) With respect to postsecondary and vocational education services, a handicapped person who meets the academic and technical standards requisite to admission or participation in the recipient's education program or activity;

(4) With respect to other services, a handicapped person who meets the essential eligibility requirements for the receipt of such services.

(l) "Handicap" means any condition or characteristic that renders a person a handicapped person as defined in paragraph (j) of this section.

§ 104.4 Discrimination prohibited.

(a) *General.* No qualified handicapped person shall, on the basis of handicap, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity which receives or

benefits from Federal financial assistance.

(b) Discriminatory actions prohibited.

(1) A recipient in providing any aid, benefit, or service, may not, directly or through contractual, licensing, or other arrangements, on the basis of handicap:

(i) Deny a qualified handicapped person the opportunity to participate in or benefit from the aid, benefit, or service;

(ii) Afford a qualified handicapped person an opportunity to participate in or benefit from the aid, benefit, or service that is not equal to that afforded others;

(iii) Provide a qualified handicapped person with an aid, benefit, or service that is not as effective as that provided to others;

(iv) Provide different or separate aid, benefits, or services to handicapped persons or to any class of handicapped persons unless such action is necessary to provide qualified handicapped persons with aid, benefits, or services that are as effective as those provided to others;

(v) Aid or perpetuate discrimination against a qualified handicapped person by providing significant assistance to an agency, organization, or person that discriminates on the basis of handicap in providing any aid, benefit, or service to beneficiaries of the recipient's program;

(vi) Deny a qualified handicapped person the opportunity to participate as a member of planning or advisory boards; or

(vii) Otherwise limit a qualified handicapped person in the enjoyment of any right, privilege, advantage, or opportunity enjoyed by others receiving an aid, benefit, or service.

(2) For purposes of this part, aids, benefits, and services, to be equally effective, are not required to produce the identical result or level of achievement for handicapped and nonhandicapped persons, but must afford handicapped persons equal opportunity to obtain the same result, to gain the same benefit, or to reach the same level of achievement, in the most integrated setting appropriate to the person's needs.

(3) Despite the existence of separate or different programs or activities provided in accordance with this part, a recipient may not deny a qualified handicapped person the opportunity to participate in such programs or activities that are not separate or different.

(4) A recipient may not, directly or through contractual or other arrangements, utilize criteria or methods of administration (i) that have the effect of subjecting qualified handicapped

persons to discrimination on the basis of handicap, (ii) that have the purpose or effect of defeating or substantially impairing accomplishment of the objectives of the recipient's program with respect to handicapped persons, or (iii) that perpetuate the discrimination of another recipient if both recipients are subject to common administrative control or are agencies of the same State.

(5) In determining the site or location of a facility, an applicant for assistance or a recipient may not make selections (i) that have the effect of excluding handicapped persons from, denying them the benefits of, or otherwise subjecting them to discrimination under any program or activity that receives or benefits from Federal financial assistance or (ii) that have the purpose or effect of defeating or substantially impairing the accomplishment of the objectives of the program or activity with respect to handicapped persons.

(6) As used in this section, the aid, benefit, or service provided under a program or activity receiving or benefiting from Federal financial assistance includes any aid, benefit, or service provided in or through a facility that has been constructed, expanded, altered, leased or rented, or otherwise acquired, in whole or in part, with Federal financial assistance.

(c) Programs limited by Federal law. The exclusion of nonhandicapped persons from the benefits of a program limited by Federal statute or executive order to handicapped persons or the exclusion of a specific class of handicapped persons from a program limited by Federal statute or executive order to a different class of handicapped persons is not prohibited by this part.

§ 104.5 Assurances required.

(a) Assurances. An applicant for Federal financial assistance for a program or activity to which this part applies shall submit an assurance, on a form specified by the Assistant Secretary, that the program will be operated in compliance with this part. An applicant may incorporate these assurances by reference in subsequent applications to the Department.

(b) Duration of obligation. (1) In the case of Federal financial assistance extended in the form of real property or to provide real property or structures on the property, the assurance will obligate the recipient or, in the case of a subsequent transfer, the transferee, for the period during which the real property or structures are used for the purpose for which Federal financial assistance is extended or for another

purpose involving the provision of similar services or benefits.

(2) In the case of Federal financial assistance extended to provide personal property, the assurance will obligate the recipient for the period during which it retains ownership or possession of the property.

(3) In all other cases the assurance will obligate the recipient for the period during which Federal financial assistance is extended.

(c) Covenants. (1) Where Federal financial assistance is provided in the form of real property or interest in the property from the Department, the instrument effecting or recording this transfer shall contain a covenant running with the land to assure nondiscrimination for the period during which the real property is used for a purpose for which the Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits.

(2) Where no transfer of property is involved but property is purchased or improved with Federal financial assistance, the recipient shall agree to include the covenant described in paragraph (b)(2) of this section in the instrument effecting or recording any subsequent transfer of the property.

(3) Where Federal financial assistance is provided in the form of real property or interest in the property from the Department, the covenant shall also include a condition coupled with a right to be reserved by the Department to revert title to the property in the event of a breach of the covenant. If a transferee of real property proposes to mortgage or otherwise encumber the real property as security for financing construction of new, or improvement of existing, facilities on the property for the purposes for which the property was transferred, the Assistant Secretary may, upon request of the transferee and if necessary to accomplish such financing and upon such conditions as he or she deems appropriate, agree to forbear the exercise of such right to revert title for so long as the lien of such mortgage or other encumbrance remains effective.

§ 104.6 Remedial action, voluntary action, and self-evaluation.

(a) Remedial action. (1) If the Assistant Secretary finds that a recipient has discriminated against persons on the basis of handicap in violation of section 504 or this part, the recipient shall take such remedial action as the Assistant Secretary deems necessary to overcome the effects of the discrimination.

(2) Where a recipient is found to have discriminated against persons on the basis of handicap in violation of section 504 or this part and where another recipient exercises control over the recipient that has discriminated, the Assistant Secretary, where appropriate, may require either or both recipients to take remedial action.

(3) The Assistant Secretary may, where necessary to overcome the effects of discrimination in violation of section 504 or this part, require a recipient to take remedial action (i) with respect to handicapped persons who are no longer participants in the recipient's program but who were participants in the program when such discrimination occurred or (ii) with respect to handicapped persons who would have been participants in the program had the discrimination not occurred.

(b) *Voluntary action.* A recipient may take steps, in addition to any action that is required by this part, to overcome the effects of conditions that resulted in limited participation in the recipient's program or activity by qualified handicapped persons.

(c) *Self-evaluation.* (1) A recipient shall, within one year of the effective date of this part:

(i) Evaluate, with the assistance of interested persons, including handicapped persons or organizations representing handicapped persons, its current policies and practices and the effects thereof that do not or may not meet the requirements of this part;

(ii) Modify, after consultation with interested persons, including handicapped persons or organizations representing handicapped persons, any policies and practices that do not meet the requirements of this part; and

(iii) Take, after consultation with interested persons, including handicapped persons or organizations representing handicapped persons, appropriate remedial steps to eliminate the effects of any discrimination that resulted from adherence to these policies and practices.

(2) A recipient that employs fifteen or more persons shall, for at least three years following completion of the evaluation required under paragraph (c)(1) of this section, maintain on file, make available for public inspection, and provide to the Assistant Secretary upon request: (i) a list of the interested persons consulted (ii) a description of areas examined and any problems identified, and (iii) a description of any modifications made and of any remedial steps taken.

§ 104.7 Designation of responsible employee and adoption of grievance procedure.

(a) *Designation of responsible employee.* A recipient that employs fifteen or more persons shall designate at least one person to coordinate its efforts to comply with this part.

(b) *Adoption of grievance procedure.* A recipient that employs fifteen or more persons shall adopt grievance procedures that incorporate appropriate due process standards and that provide for the prompt and equitable resolution of complaints alleging any action prohibited by this part. Such procedures need not be established with respect to complaints from applicants for employment or from applicants for admission to postsecondary educational institutions.

§ 104.8 Notice.

(a) A recipient that employs fifteen or more persons shall take appropriate initial and continuing steps to notify participants, beneficiaries, applicants, and employees, including those with impaired vision or hearing, and unions or professional organizations holding collective bargaining or professional agreements with the recipient that it does not discriminate on the basis of handicap in violation of section 504 and this part. The notification shall state, where appropriate, that the recipient does not discriminate in admission or access to, or treatment or employment in, its programs and activities. The notification shall also include an identification of the responsible employee designated pursuant to § 104.7(a). A recipient shall make the initial notification required by this paragraph within 90 days of the effective date of this part. Methods of initial and continuing notification may include the posting of notices, publication in newspapers and magazines, placement of notices in recipients' publications, and distribution of memoranda or other written communications.

(b) If a recipient publishes or uses recruitment materials or publications containing general information that it makes available to participants, beneficiaries, applicants, or employees, it shall include in those materials or publications a statement of the policy described in paragraph (a) of this section. A recipient may meet the requirement of this paragraph either by including appropriate inserts in existing materials and publications or by revising and reprinting the materials and publications.

§ 104.9 Administrative requirements for small recipients.

The Assistant Secretary may require any recipient with fewer than fifteen employees, or any class of such recipients, to comply with §§ 104.7 and 104.8 in whole or in part, when the Assistant Secretary finds a violation of this part or finds that such compliance will not significantly impair the ability of the recipient or class of recipients to provide benefits or services.

§ 104.10 Effect of state or local law or other requirements and effect of employment opportunities.

(a) The obligation to comply with this part is not obviated or alleviated by the existence of any state or local law or other requirement that on the basis of handicap, imposes prohibitions or limits upon the eligibility of qualified handicapped persons to receive services or to practice any occupation or profession.

(b) The obligation to comply with this part is not obviated or alleviated because employment opportunities in any occupation or profession are or may be more limited for handicapped persons than for nonhandicapped persons.

Subpart B—Employment Practices

§ 104.11 Discrimination prohibited.

(a) *General.* (1) No qualified handicapped person shall, on the basis of handicap, be subjected to discrimination in employment under any program or activity to which this part applies.

(2) A recipient that receives assistance under the Education of the Handicapped Act shall take positive steps to employ and advance in employment qualified handicapped persons in programs assisted under that Act.

(3) A recipient shall make all decisions concerning employment under any program or activity to which this part applies in a manner which ensures that discrimination on the basis of handicap does not occur and may not limit, segregate, or classify applicants or employees in any way that adversely affects their opportunities or status because of handicap.

(4) A recipient may not participate in a contractual or other relationship that has the effect of subjecting qualified handicapped applicants or employees to discrimination prohibited by this subpart. The relationships referred to in this subparagraph include relationships with employment and referral agencies, with labor unions, with organizations providing or administering fringe

benefits to employees of the recipient, and with organizations providing training and apprenticeship programs.

(b) *Specific activities.* The provisions of this subpart apply to:

(1) Recruitment, advertising, and the processing of applications for employment;

(2) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;

(3) Rates of pay or any other form of compensation and changes in compensation;

(4) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority list;

(5) Leaves of absence, sick leave, or any other leave;

(6) Fringe benefits available by virtue of employment, whether or not administered by the recipient;

(7) Selection and financial support for training, including apprenticeship, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

(8) Employer sponsored activities, including social or recreational programs; and

(9) Any other term, condition, or privilege of employment.

(c) A recipient's obligation to comply with this subpart is not affected by any inconsistent term of any collective bargaining agreement to which it is a party.

§ 104.12 Reasonable accommodation.

(a) A recipient shall make reasonable accommodation to the known physical or mental limitations of an otherwise qualified handicapped applicant or employee unless the recipient can demonstrate that the accommodation would impose an undue hardship on the operation of its program.

(b) Reasonable accommodation may include: (1) making facilities used by employees readily accessible to and usable by handicapped persons, and (2) job restructuring, part-time or modified work schedules, acquisition or modification of equipment or devices, the provision of readers or interpreters, and other similar actions.

(c) In determining pursuant to paragraph (a) of this section whether an accommodation would impose an undue hardship on the operation of a recipient's program, factors to be considered include:

(1) The overall size of the recipient's program with respect to number of employees, number and type of facilities, and size of budget;

(2) The type of the recipient's operation, including the composition and structure of the recipient's workforce; and

(3) The nature and cost of the accommodation needed.

(d) A recipient may not deny any employment opportunity to a qualified handicapped employee or applicant if the basis for the denial is the need to make reasonable accommodation to the physical or mental limitations of the employee or applicant.

§ 104.13 Employment criteria.

(a) A recipient may not make use of any employment test or other selection criterion that screens out or tends to screen out handicapped persons or any class of handicapped persons unless: (1) the test score or other selection criterion, as used by the recipient, is shown to be job-related for the position in question, and (2) alternative job-related tests or criteria that do not screen out or tend to screen out as many handicapped persons are not shown by the Director to be available.

(b) A recipient shall select and administer tests concerning employment so as best to ensure that, when administered to an applicant or employee who has a handicap that impairs sensory, manual, or speaking skills, the test results accurately reflect the applicant's or employee's job skills, aptitude, or whatever other factor the test purports to measure, rather than reflecting the applicant's or employee's impaired sensory, manual, or speaking skills (except where those skills are the factors that the test purports to measure).

§ 104.14 Preemployment inquiries.

(a) Except as provided in paragraphs (b) and (c) of this section, a recipient may not conduct a preemployment medical examination or may not make preemployment inquiry of an applicant as to whether the applicant is a handicapped person or as to the nature or severity of a handicap. A recipient may, however, make preemployment inquiry into an applicant's ability to perform job-related functions.

(b) When a recipient is taking remedial action to correct the effects of past discrimination pursuant to § 84.6 (a), when a recipient is taking voluntary action to overcome the effects of conditions that resulted in limited participation in its federally assisted program or activity pursuant to § 84.6(b), or when a recipient is taking affirmative action pursuant to section 503 of the Act, the recipient may invite applicants for employment to indicate whether and

to what extent they are handicapped. *Provided, That:*

(1) The recipient states clearly on any written questionnaire used for this purpose or makes clear orally if no written questionnaire is used that the information requested is intended for use solely in connection with its remedial action obligations or its voluntary or affirmative action efforts; and

(2) The recipient states clearly that the information is being requested on a voluntary basis, that it will be kept confidential as provided in paragraph (d) of this section, that refusal to provide it will not subject the applicant or employee to any adverse treatment, and that it will be used only in accordance with this part.

(c) Nothing in this section shall prohibit a recipient from conditioning an offer of employment on the results of a medical examination conducted prior to the employee's entrance on duty. *Provided, That:* (1) All entering employees are subjected to such an examination regardless of handicap, and (2) the results of such an examination are used only in accordance with the requirements of this part.

(d) Information obtained in accordance with this section as to the medical condition or history of the applicant shall be collected and maintained on separate forms that shall be accorded confidentiality as medical records, except that:

(1) Supervisors and managers may be informed regarding restrictions on the work or duties of handicapped persons and regarding necessary accommodations;

(2) First aid and safety personnel may be informed, where appropriate, if the condition might require emergency treatment; and

(3) Government officials investigating compliance with the Act shall be provided relevant information upon request.

§§ 104.15-104.20 [Reserved]

Subpart C—Program Accessibility

§ 104.21 Discrimination prohibited.

No qualified handicapped person shall, because a recipient's facilities are inaccessible to or unusable by handicapped persons, be denied the benefits of, be excluded from participation in, or otherwise be subjected to discrimination under any program or activity to which this part applies.

§ 104.22 Existing facilities.

(a) *Program accessibility.* A recipient shall operate each program or activity to

which this part applies so that the program or activity, when viewed in its entirety, is readily accessible to handicapped persons. This paragraph does not require a recipient to make each of its existing facilities or every part of a facility accessible to and usable by handicapped persons.

(b) *Methods.* A recipient may comply with the requirements of paragraph (a) of this section through such means as redesign of equipment, reassignment of classes or other services to accessible buildings, assignment of aides to beneficiaries, home visits, delivery of health, welfare, or other social services at alternate accessible sites, alteration of existing facilities and construction of new facilities in conformance with the requirements of § 104.23, or any other methods that result in making its program or activity accessible to handicapped persons. A recipient is not required to make structural changes in existing facilities where other methods are effective in achieving compliance with paragraph (a) of this section. In choosing among available methods for meeting the requirement of paragraph (a) of this section, a recipient shall give priority to those methods that offer programs and activities to handicapped persons in the most integrated setting appropriate.

(c) *Small health, welfare, or other social service providers.* If a recipient with fewer than fifteen employees that provides health, welfare, or other social services finds, after consultation with a handicapped person seeking its services, that there is no method of complying with paragraph (a) of this section other than making a significant alteration in its existing facilities, the recipient may, as an alternative, refer the handicapped person to other providers of those services that are accessible.

(d) *Time period.* A recipient shall comply with the requirement of paragraph (a) of this section within sixty days of the effective date of this part except that where structural changes in facilities are necessary, such changes shall be made within three years of the effective date of this part, but in any event as expeditiously as possible.

(e) *Transition plan.* In the event that structural changes to facilities are necessary to meet the requirement of paragraph (a) of this section, a recipient shall develop, within six months of the effective date of this part, a transition plan setting forth the steps necessary to complete such changes. The plan shall be developed with the assistance of interested persons, including handicapped persons or organizations representing handicapped persons. A copy of the transition plan shall be

made available for public inspection. The plan shall, at a minimum:

(1) Identify physical obstacles in the recipient's facilities that limit the accessibility of its program or activity to handicapped persons;

(2) Describe in detail the methods that will be used to make the facilities accessible;

(3) Specify the schedule for taking the steps necessary to achieve full program accessibility and, if the time period of the transition plan is longer than one year, identify the steps of that will be taken during each year of the transition period; and

(4) Indicate the person responsible for implementation of the plan.

(f) *Notice.* The recipient shall adopt and implement procedures to ensure that interested persons, including persons with impaired vision or hearing, can obtain information as to the existence and location of services, activities, and facilities that are accessible to and usable by handicapped persons.

§ 104.23 New construction.

(a) *Design and construction.* Each facility or part of a facility constructed by, on behalf of, or for the use of a recipient shall be designed and constructed in such manner that the facility or part of the facility is readily accessible to and usable by handicapped persons, if the construction was commenced after the effective date of this part.

(b) *Alteration.* Each facility or part of a facility which is altered by, on behalf of, or for the use of a recipient after the effective date of this part in a manner that affects or could affect the usability of the facility or part of the facility shall, to the maximum extent feasible, be altered in such manner that the altered portion of the facility is readily accessible to and usable by handicapped persons.

(c) *American National Standards Institute accessibility standards.* Design, construction, or alteration of facilities in conformance with the "American National Standards Institute Specifications for Making Buildings and Facilities Accessible to and Usable by the Physically Handicapped," published by the American National Standards Institute, Inc. (ANSI A117.1-1981 (R107.1)), which is incorporated by reference in this part, shall constitute compliance with paragraphs (a) and (b) of this section. Departures from particular requirements of those standards by the use of other methods shall be permitted when it is clearly evident that equivalent access to the facility or part of the facility is thereby

provided. Incorporation by reference provisions approved by the Director of the Federal Register, May 27, 1978. Incorporated documents are on file at the Office of the Federal Register.

Copies obtainable from American National Standards Institute, Inc., 1430 Broadway, New York, N.Y. 10018.

§ 104.24-104.30 (Reserved)

Subpart D—Preschool, Elementary, and Secondary Education

§ 104.31 Application of this subpart.

Subpart D applies to preschool, elementary, secondary, and adult education programs and activities that receive or benefit from Federal financial assistance and to recipients that operate, or that receive or benefit from Federal financial assistance for the operation of, such programs or activities.

§ 104.32 Location and notification.

A recipient that operates a public elementary or secondary education program shall annually:

(a) Undertake to identify and locate every qualified handicapped person residing in the recipient's jurisdiction who is not receiving a public education; and

(b) Take appropriate steps to notify handicapped persons and their parents or guardians of the recipient's duty under this subpart.

§ 104.33 Free appropriate public education.

(a) *General.* A recipient that operates a public elementary or secondary education program shall provide a free appropriate public education to each qualified handicapped person who is in the recipient's jurisdiction, regardless of the nature or severity of the person's handicap.

(b) *Appropriate education.* (1) For the purpose of this subpart, the provision of an appropriate education is the provision of regular or special education and related aids and services that (i) are designed to meet individual educational needs of handicapped persons as adequately as the needs of nonhandicapped persons are met and (ii) are based upon adherence to procedures that satisfy the requirements of §§ 104.34, 104.35, and 104.36.

(2) Implementation of an individualized education program developed in accordance with the Education of the Handicapped Act is one means of meeting the standard established in paragraph (b)(1)(i) of this section.

(3) A recipient may place a handicapped person in or refer such person to a program other than the one

that it operates as its means of carrying out the requirements of this subpart. If so, the recipient remains responsible for ensuring that the requirements of this subpart are met with respect to any handicapped person so placed or referred.

(c) *Free education*—(1) *General*. For the purpose of this section, the provision of a free education is the provision of educational and related services without cost to the handicapped person or to his or her parents or guardian, except for those fees that are imposed on non-handicapped persons or their parents or guardian. It may consist either of the provision of free services or, if a recipient places a handicapped person in or refers such person to a program not operated by the recipient as its means of carrying out the requirements of this subpart, of payment for the costs of the program. Funds available from any public or private agency may be used to meet the requirements of this subpart. Nothing in this section shall be construed to relieve an insurer or similar third party from an otherwise valid obligation to provide or pay for services provided to a handicapped person.

(2) *Transportation*. If a recipient places a handicapped person in or refers such person to a program not operated by the recipient as its means of carrying out the requirements of this subpart, the recipient shall ensure that adequate transportation to and from the program is provided at no greater cost than would be incurred by the person or his or her parents or guardian if the person were placed in the program operated by the recipient.

(3) *Residential placement*. If placement in a public or private residential program is necessary to provide a free appropriate public education to a handicapped person because of his or her handicap, the program, including non-medical care and room and board, shall be provided at no cost to the person or his or her parents or guardian.

(4) *Placement of handicapped persons by parents*. If a recipient has made available, in conformance with the requirements of this section and § 104.34, a free appropriate public education to a handicapped person and the person's parents or guardian choose to place the person in a private school, the recipient is not required to pay for the person's education in the private school. Disagreements between a parent or guardian and a recipient regarding whether the recipient has made such a program available or otherwise regarding the question of financial responsibility are subject to the due process procedures of § 104.36.

(d) *Compliance*. A recipient may not exclude any qualified handicapped person from a public elementary or secondary education after the effective date of this part. A recipient that is not, on the effective date of this regulation, in full compliance with the other requirements of the preceding paragraphs of this section shall meet such requirements at the earliest practicable time and in no event later than September 1, 1978.

§ 104.34 Educational setting.

(a) *Academic setting*. A recipient to which this subpart applies shall educate, or shall provide for the education of, each qualified handicapped person in its jurisdiction with persons who are not handicapped to the maximum extent appropriate to the needs of the handicapped person. A recipient shall place a handicapped person in the regular educational environment operated by the recipient unless it is demonstrated by the recipient that the education of the person in the regular environment with the use of supplementary aids and services cannot be achieved satisfactorily. Whenever a recipient places a person in a setting other than the regular educational environment pursuant to this paragraph, it shall take into account the proximity of the alternate setting to the person's home.

(b) *Nonacademic settings*. In providing or arranging for the provision of nonacademic and extracurricular services and activities, including meals, recess periods, and the services and activities set forth in § 104.37(a)(2), a recipient shall ensure that handicapped persons participate with nonhandicapped persons in such activities and services to the maximum extent appropriate to the needs of the handicapped person in question.

(c) *Comparable facilities*. If a recipient, in compliance with paragraph (a) of this section, operates a facility that is identifiable as being for handicapped persons, the recipient shall ensure that the facility and the services and activities provided therein are comparable to the other facilities, services, and activities of the recipient.

§ 104.35 Evaluation and placement.

(a) *Preplacement evaluation*. A recipient that operates a public elementary or secondary education program shall conduct an evaluation in accordance with the requirements of paragraph (b) of this section of any person who, because of handicap, needs or is believed to need special education or related services before taking any action with respect to the initial

placement of the person in a regular or special education program and any subsequent significant change in placement.

(b) *Evaluation procedures*. A recipient to which this subpart applies shall establish standards and procedures for the evaluation and placement of persons who, because of handicap, need or are believed to need special education or related services which ensure that:

(1) Tests and other evaluation materials have been validated for the specific purpose for which they are used and are administered by trained personnel in conformance with the instructions provided by their producer;

(2) Tests and other evaluation materials include those tailored to assess specific areas of educational need and not merely those which are designed to provide a single general intelligence quotient; and

(3) Tests are selected and administered so as best to ensure that when a test is administered to a student with impaired sensory, manual, or speaking skills, the test results accurately reflect the student's aptitude or achievement level or whatever other factor the test purports to measure, rather than reflecting the student's impaired sensory, manual, or speaking skills (except where those skills are the factors that the test purports to measure).

(c) *Placement procedures*. In interpreting evaluation data and in making placement decisions, a recipient shall (1) draw upon information from a variety of sources, including aptitude and achievement tests, teacher recommendations, physical condition, social or cultural background, and adaptive behavior; (2) establish procedures to ensure that information obtained from all such sources is documented and carefully considered; (3) ensure that the placement decision is made by a group of persons, including persons knowledgeable about the child, the meaning of the evaluation data, and the placement options; and (4) ensure that the placement decision is made in conformity with § 104.34.

(d) *Reevaluation*. A recipient to which this section applies shall establish procedures, in accordance with paragraph (b) of this section, for periodic reevaluation of students who have been provided special education and related services. A reevaluation procedure consistent with the Education for the Handicapped Act is one means of meeting this requirement.

§ 104.36 Procedural safeguards.

A recipient that operates a public elementary or secondary education

program shall establish and implement with respect to actions regarding the identification, evaluation, or educational placement of persons who, because of handicap, need or are believed to need special instruction or related services, a system of procedural safeguards that includes notice, an opportunity for the parents or guardian of the person to examine relevant records, an impartial hearing with opportunity for participation by the person's parents or guardian and representation by counsel, and a review procedure. Compliance with the procedural safeguards of section 618 of the Education of the Handicapped Act is one means of meeting this requirement.

§ 104.37 Nonacademic services.

(a) *General.* (1) A recipient to which this subpart applies shall provide non-academic and extracurricular services and activities in such manner as is necessary to afford handicapped students an equal opportunity for participation in such services and activities.

(2) Nonacademic and extracurricular services and activities may include counseling services, physical recreational activities, transportation, health services, recreational activities, special interest groups or clubs sponsored by the recipients, referrals to agencies which provide assistance to handicapped persons, and employment of students, including both employment by the recipient and assistance in making available outside employment.

(b) *Counseling services.* A recipient to which this subpart applies that provides personal, academic, or vocational counseling, guidance, or placement services to its students shall provide these services without discrimination on the basis of handicap. The recipient shall ensure that qualified handicapped students are not counseled toward more restrictive career objectives than are nonhandicapped students with similar interests and abilities.

(c) *Physical education and athletics.* (1) In providing physical education courses and athletics and similar programs and activities to any of its students, a recipient to which this subpart applies may not discriminate on the basis of handicap. A recipient that offers physical education courses or that operates or sponsors interscholastic, club, or intramural athletics shall provide to qualified handicapped students an equal opportunity for participation in these activities.

(2) A recipient may offer to handicapped students physical education and athletic activities that are separate or different from those offered

to nonhandicapped students only if separation or differentiation is consistent with the requirements of § 104.34 and only if no qualified handicapped student is denied the opportunity to compete for teams or to participate in courses that are not separate or different.

§ 104.38 Preschool and adult education programs.

A recipient to which this subpart applies that operates a preschool education or day care program or activity or an adult education program or activity may not, on the basis of handicap, exclude qualified handicapped persons from the program or activity and shall take into account the needs of such persons in determining the aid, benefits, or services to be provided under the program or activity.

§ 104.39 Private education programs.

(a) A recipient that operates a private elementary or secondary education program may not, on the basis of handicap, exclude a qualified handicapped person from such program if the person can, with minor adjustments, be provided an appropriate education, as defined in § 104.33(b)(1), within the recipient's program.

(b) A recipient to which this section applies may not charge more for the provision of an appropriate education to handicapped persons than to nonhandicapped persons except to the extent that any additional charge is justified by a substantial increase in cost to the recipient.

(c) A recipient to which this section applies that operates special education programs shall operate such programs in accordance with the provisions of §§ 104.35 and 104.36. Each recipient to which this section applies is subject to the provisions of §§ 104.34, 104.37, and 104.38.

§ 104.40 [Reserved]

Subpart E—Postsecondary Education

§ 104.41 Application of this subpart.

Subpart E applies to postsecondary education programs and activities, including postsecondary vocational education programs and activities, that receive or benefit from Federal financial assistance and to recipients that operate, or that receive or benefit from Federal financial assistance for the operation of, such programs or activities.

§ 104.42 Admissions and recruitment.

(a) *General.* Qualified handicapped persons may not, on the basis of handicap, be denied admission or be subjected to discrimination in admission

or recruitment by a recipient to which this subpart applies.

(b) *Admissions.* In administering its admission policies, a recipient to which this subpart applies:

(1) May not apply limitations upon the number or proportion of handicapped persons who may be admitted;

(2) May not make use of any test or criterion for admission that has a disproportionate, adverse effect on handicapped persons or any class of handicapped persons unless (i) the test or criterion, as used by the recipient, has been validated as a predictor of success in the education program or activity in question and (ii) alternate tests or criteria that have a less disproportionate, adverse effect are not shown by the Assistant Secretary to be available.

(3) Shall assure itself that (i) admissions tests are selected and administered so as best to ensure that, when a test is administered to an applicant who has a handicap that impairs sensory, manual, or speaking skills, the test results accurately reflect the applicant's aptitude or achievement level or whatever other factor the test purports to measure, rather than reflecting the applicant's impaired sensory, manual, or speaking skills (except where those skills are the factors that the test purports to measure); (ii) admissions tests that are designed for persons with impaired sensory, manual, or speaking skills are offered as often and in as timely a manner as are other admissions tests; and (iii) admissions tests are administered in facilities that, on the whole, are accessible to handicapped persons; and

(4) Except as provided in paragraph (c) of this section, may not make preadmission inquiry as to whether an applicant for admission is a handicapped person but, after admission, may make inquiries on a non-discriminatory basis as to handicaps that may require accommodation.

(c) *Preadmission inquiry exception.* When a recipient is taking remedial action to correct the effects of past discrimination pursuant to § 104.6(a) or when a recipient is taking voluntary action to overcome the effects of conditions that resulted in limited participation in its federally assisted program or activity pursuant to § 104.6(b), the recipient may invite applicants for admission to indicate whether and to what extent they are handicapped. *Provided, That:*

(1) The recipient states clearly on any written questionnaire used for this purpose or makes clear orally if no written questionnaire is used that the

information requested is intended for use solely in connection with its remedial action obligations or its voluntary action efforts; and

(2) The recipient states clearly that the information is being requested on a voluntary basis, that it will be kept confidential, that refusal to provide it will not subject the applicant to any adverse treatment, and that it will be used only in accordance with this part.

(d) *Validity studies.* For the purpose of paragraph (b)(2) of this section, a recipient may base prediction equations on first year grades, but shall conduct periodic validity studies against the criterion of overall success in the education program or activity in question in order to monitor the general validity of the test scores.

§ 104.43 Treatment of students; general.

(a) No qualified handicapped student shall, on the basis of handicap, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any academic, research, occupational training, housing, health insurance, counseling, financial aid, physical education, athletics, recreation, transportation, other extracurricular, or other postsecondary education program or activity to which this subpart applies.

(b) A recipient to which this subpart applies that considers participation by students in education programs or activities not operated wholly by the recipient as part of, or equivalent to, and education program or activity operated by the recipient shall assure itself that the other education program or activity, as a whole, provides an equal opportunity for the participation of qualified handicapped persons.

(c) A recipient to which this subpart applies may not, on the basis of handicap, exclude any qualified handicapped student from any course, course of study, or other part of its education program or activity.

(d) A recipient to which this subpart applies shall operate its programs and activities in the most integrated setting appropriate.

§ 104.44 Academic adjustments.

(a) *Academic requirements.* A recipient to which this subpart applies shall make such modifications to its academic requirements as are necessary to ensure that such requirements do not discriminate or have the effect of discriminating, on the basis of handicap, against a qualified handicapped applicant or student. Academic requirements that the recipient can demonstrate are essential to the program of instruction being pursued by

such student or to any directly related licensing requirement will not be regarded as discriminatory within the meaning of this section. Modifications may include changes in the length of time permitted for the completion of degree requirements, substitution of specific courses required for the completion of degree requirements, and adaptation of the manner in which specific courses are conducted.

(b) *Other rules.* A recipient to which this subpart applies may not impose upon handicapped students other rules, such as the prohibition of tape recorders in classrooms or of dog guides in campus buildings, that have the effect of limiting the participation of handicapped students in the recipient's education program or activity.

(c) *Course examinations.* In its course examinations or other procedures for evaluating students' academic achievement in its program, a recipient to which this subpart applies shall provide such methods for evaluating the achievement of students who have a handicap that impairs sensory, manual, or speaking skills as will best ensure that the results of the evaluation represents the student's achievement in the course, rather than reflecting the student's impaired sensory, manual, or speaking skills (except where such skills are the factors that the test purports to measure).

(d) *Auxiliary aids.* (1) A recipient to which this subpart applies shall take such steps as are necessary to ensure that no handicapped student is denied the benefits of, excluded from participation in, or otherwise subjected to discrimination under the education program or activity operated by the recipient because of the absence of educational auxiliary aids for students with impaired sensory, manual, or speaking skills.

(2) Auxiliary aids may include taped texts, interpreters or other effective methods of making orally delivered materials available to students with hearing impairments, readers in libraries for students with visual impairments, classroom equipment adapted for use by students with manual impairments, and other similar services and actions. Recipients need not provide attendants, individually prescribed devices, readers for personal use or study, or other devices or services of a personal nature.

§ 104.45 Housing.

(a) *Housing provided by the recipient.* A recipient that provides housing to its nonhandicapped students shall provide comparable, convenient, and accessible housing to handicapped students at the same cost as to others. At the end of the

transition period provided for in Subpart C, such housing shall be available in sufficient quantity and variety so that the scope of handicapped students' choice of living accommodations is, as a whole, comparable to that of nonhandicapped students.

(b) *Other housing.* A recipient that assists any agency, organization, or person in making housing available to any of its students shall take such action as may be necessary to assure itself that such housing is, as a whole, made available in a manner that does not result in discrimination on the basis of handicap.

§ 104.46 Financial and employment assistance to students.

(a) *Provision of financial assistance.* (1) In providing financial assistance to qualified handicapped persons, a recipient to which this subpart applies may not (i), on the basis of handicap, provide less assistance than is provided to nonhandicapped persons, limit eligibility for assistance, or otherwise discriminate or (ii) assist any entity or person that provides assistance to any of the recipient's students in a manner that discriminates against qualified handicapped persons on the basis of handicap.

(2) A recipient may administer or assist in the administration of scholarships, fellowships, or other forms of financial assistance established under wills, trusts, bequests, or similar legal instruments that require awards to be made on the basis of factors that discriminate or have the effect of discriminating on the basis of handicap only if the overall effect of the award of scholarships, fellowships, and other forms of financial assistance is not discriminatory on the basis of handicap.

(b) *Assistance in making available outside employment.* A recipient that assists any agency, organization, or person in providing employment opportunities to any of its students shall assure itself that such employment opportunities, as a whole, are made available in a manner that would not violate Subpart A, if they were provided by the recipient.

(c) *Employment of students by recipients.* A recipient that employs any of its students may not do so in a manner that violates Subpart B.

§ 104.47 Nonacademic services.

(a) Physical education and athletics.

(1) In providing physical education courses and athletics and similar programs and activities to any of its students, a recipient to which this subpart applies may not discriminate on the basis of handicap. A recipient

that offers physical education courses or that operates or sponsors intercollegiate, club, or intramural athletics shall provide to qualified handicapped students an equal opportunity for participation in these activities.

(2) A recipient may offer to handicapped students physical education and athletic activities that are separate or different only if separation or differentiation is consistent with the requirements of § 104.43(d) and only if no qualified handicapped student is denied the opportunity to compete for teams or to participate in courses that are not separate or different.

(b) *Counseling and placement services.* A recipient to which this subpart applies that provides personal, academic, or vocational counseling, guidance, or placement services to its students shall provide these services without discrimination on the basis of handicap. The recipient shall ensure that qualified handicapped students are not counseled toward more restrictive career objectives than are nonhandicapped students with similar interests and abilities. This requirement does not preclude a recipient from providing factual information about licensing and certification requirements that may present obstacles to handicapped persons in their pursuit of particular careers.

(c) *Social organizations.* A recipient that provides significant assistance to fraternities, sororities, or similar organizations shall assure itself that the membership practices of such organizations do not permit discrimination otherwise prohibited by this subpart.

§ 104.48-104.50 [Reserved]

Subpart F—Health, Welfare, and Social Services

§ 104.51 Application of this subpart.

Subpart F applies to health, welfare, and other social service programs and activities that receive or benefit from Federal financial assistance and to recipients that operate, or that receive or benefit from Federal financial assistance for the operation of, such programs or activities.

§ 104.52 Health, welfare, and other social services.

(a) *General.* In providing health, welfare, or other social services or benefits, a recipient may not, on the basis of handicap:

(1) Deny a qualified handicapped person these benefits or services;

(2) Afford a qualified handicapped person an opportunity to receive

benefits or services that is not equal to that offered nonhandicapped persons;

(3) Provide a qualified handicapped person with benefits or services that are not as effective (as defined in § 104.4(b)) as the benefits or services provided to others;

(4) Provide benefits or services in a manner that limits or has the effect of limiting the participation of qualified handicapped persons; or

(5) Provide different or separate benefits or services to handicapped persons except where necessary to provide qualified handicapped persons with benefits and services that are as effective as those provided to others.

(b) *Notice.* A recipient that provides notice concerning benefits or services or written material concerning waivers of rights or consent to treatment shall take such steps as are necessary to ensure that qualified handicapped persons, including those with impaired sensory or speaking skills, are not denied effective notice because of their handicap.

(c) *Emergency treatment for the hearing impaired.* A recipient hospital that provides health services or benefits shall establish a procedure for effective communication with persons with impaired hearing for the purpose of providing emergency health care.

(d) *Auxiliary aids.* (1) A recipient to which this subpart applies that employs fifteen or more persons shall provide appropriate auxiliary aids to persons with impaired sensory, manual, or speaking skills, where necessary to afford such persons an equal opportunity to benefit from the service in question.

(2) The Assistant Secretary may require recipients with fewer than fifteen employees to provide auxiliary aids where the provision of aids would not significantly impair the ability of the recipient to provide its benefits or services.

(3) For the purpose of this paragraph, auxiliary aids may include brailled and taped material, interpreters, and other aids for persons with impaired hearing or vision.

§ 104.53 Drug and alcohol addicts.

A recipient to which this subpart applies that operates a general hospital or outpatient facility may not discriminate in admission or treatment against a drug or alcohol abuser or alcoholic who is suffering from a medical condition, because of the person's drug or alcohol abuse or alcoholism.

§ 104.54 Education of institutionalized persons.

A recipient to which this subpart applies and that operates or supervises a program or activity for persons who are institutionalized because of handicap shall ensure that each qualified handicapped person, as defined in § 104.3(k)(2), in its program or activity is provided an appropriate education, as defined in § 104.33(b). Nothing in this section shall be interpreted as altering in any way the obligations of recipients under Subpart D.

§ 104.55-104.60 [Reserved]

Subpart G—Procedures

§ 104.61 Procedures.

The procedural provisions applicable to title VI of the Civil Rights Act of 1964 apply to this part. These procedures are found in §§ 100.6-100.10 and Part 101 of this title.

§§ 104.62-104.99 [Reserved]

Appendix A—Analysis of Final Regulation

Subpart A—General Provisions

Definitions—1. "Recipient." Section 104.23 contains definitions used throughout the regulation.

One comment requested that the regulation specify that nonpublic elementary and secondary schools that are not otherwise recipients do not become recipients by virtue of the fact their students participate in certain federally funded programs. The Secretary believes it unnecessary to amend the regulation in this regard, because almost identical language in the Department's regulations implementing title VI and title IX of the Education Amendments of 1972 has consistently been interpreted so as not to render such schools recipients. These schools, however, are indirectly subject to the substantive requirements of this regulation through the application of § 104.4(b)(iv), which prohibits recipients from assisting agencies that discriminate on the basis of handicap in providing services to beneficiaries of the recipients' programs.

2. *"Federal financial assistance."* In § 104.3(b), defining federal financial assistance, a clarifying change has been made: procurement contracts are specifically excluded. They are covered, however, by the Department of Labor's regulation under section 503. The Department has never considered such contracts to be contracts of assistance; the explicit exemption has been added only to avoid possible confusion.

The proposed regulation's exemption of contracts of insurance or guaranty has been retained. A number of comments argued for its deletion on the ground that section 504, unlike title VI and title IX, contains no statutory exemption for such contracts. There is no indication, however, in the legislative history of the Rehabilitation Act of 1973 or of the amendments to that Act in 1974, that Congress intended section 504 to have a

broader application, in terms of federal financial assistance, than other civil rights statutes. Indeed, Congress directed that section 504 be implemented in the same manner as titles VI and IX. In view of the long established exemption of contracts of insurance or guaranty under title VI, we think it unlikely that Congress intended section 504 to apply to such contracts.

3. "Handicapped person". Section 104.3(f), which defines the class of persons protected under the regulation, has not been substantively changed. The definition of handicapped person in paragraph (f)(3) conforms to the statutory definition of handicapped person that is applicable to section 504, as set forth in section 111(a) of the Rehabilitation Act Amendments of 1973, Pub. L. 93-516.

The first of the three parts of the statutory and regulatory definition includes any person who has a physical or mental impairment that substantially limits one or more major life activities. Paragraph (f)(2)(i) further defines physical or mental impairments. The definition does not set forth a list of specific diseases and conditions that constitute physical or mental impairments because of the difficulty of ensuring the comprehensiveness of any such list. The term includes, however, such diseases and conditions as orthopedic, visual, speech, and hearing impairments, cerebral palsy, epilepsy, muscular dystrophy, multiple sclerosis, cancer, heart disease, diabetes, mental retardation, emotional illness, and, as discussed below, drug addiction and alcoholism.

It should be emphasized that a physical or mental impairment does not constitute a handicap for purposes of section 504 unless its severity is such that it results in a substantial limitation of one or more major life activities. Several comments observed the lack of any definition in the proposed regulation of the phrase "substantially limits." The Department does not believe that a definition of this term is possible at this time.

A related issue raised by several comments is whether the definition of handicapped person is unreasonably broad. Comments suggested narrowing the definition in various ways. The most common recommendation was that only "traditional" handicaps be covered. The Department continues to believe, however, that it has no flexibility within the statutory definition to limit the term to persons who have those severe, permanent, or progressive conditions that are most commonly regarded as handicaps. The Department intends, however, to give particular attention in its enforcement of section 504 to eliminating discrimination against persons with the severe handicaps that were the focus of concern in the Rehabilitation Act of 1973.

The definition of handicapped person also includes specific limitations on what persons are classified as handicapped under the regulation. The first of the three parts of the definition specifies that only physical and mental handicaps are included. Thus, environmental, cultural, and economic disadvantage are not in themselves covered, nor are prison records, age, or homosexuality.

Of course, if a person who has any of these characteristics also has a physical or mental handicap, the person is included within the definition of handicapped person.

In paragraph (f)(2)(i), physical or mental impairment is defined to include, among other impairments, specific learning disabilities. The Department will interpret the term as it is used in section 602 of the Education of the Handicapped Act, as amended. Paragraph (3) of section 602 uses the term "specific learning disabilities" to describe such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.

Paragraph (f)(2)(ii) has been shortened, but not substantively changed, by the deletion of clause (C), which made explicit the inclusion of any condition which is mental or physical but whose precise nature is not at present known. Clauses (A) and (B) clearly comprehend such conditions.

The second part of the statutory and regulatory definition of handicapped person includes any person who has a record of a physical or mental impairment that substantially limits a major life activity. Under the definition of "record" in paragraph (f)(2)(iii), persons who have a history of a handicapping condition but no longer have the condition, as well as persons who have been incorrectly classified as having such a condition, are protected from discrimination under section 504. Frequently occurring examples of the first group are persons with histories of mental or emotional illness, heart disease, or cancer; of the second group, persons who have been misclassified as mentally retarded.

The third part of the statutory and regulatory definition of handicapped person includes any person who is regarded as having a physical or mental impairment that substantially limits one or more major life activities. It includes many persons who are ordinarily considered to be handicapped but who do not technically fall within the first two parts of the statutory definition, such as persons with a limp. This part of the definition also includes some persons who might not ordinarily be considered handicapped, such as persons with disfiguring scars, as well as persons who have no physical or mental impairment but are treated by a recipient as if they were handicapped.

4. *Drug addicts and alcoholics.* As was the case during the first comment period, the issue of whether to include drug addicts and alcoholics within the definition of handicapped person was of major concern to many commenters. The arguments presented on each side of the issue were similar during the two comment periods, as was the preference of commenters for exclusion of this group of persons. While some comments reflected misconceptions about the implications of including alcoholics and drug addicts within the scope of the regulation, the Secretary understands the concerns that underlie the comments on this question and recognizes that application of section 504 to active alcoholics and drug addicts presents sensitive and difficult questions that must be taken into account in interpretation and enforcement.

The Secretary has carefully examined the issue and has obtained a legal opinion from the Attorney General. That opinion concludes that drug addiction and alcoholism are "physical or mental impairments" within the meaning of section 7(6) of the Rehabilitation Act of 1973, as amended, and that drug addicts and alcoholics are therefore handicapped for purposes of section 504 if their impairment substantially limits one of their major life activities. The Secretary therefore believes that he is without authority to exclude these conditions from the definition. There is a medical and legal consensus that alcoholism and drug addiction are diseases, although there is disagreement as to whether they are primarily mental or physical. In addition, while Congress did not focus specifically on the problems of drug addiction and alcoholism in enacting section 504, the committees that considered the Rehabilitation Act of 1973 were made aware of the Department's long-standing practice of treating addicts and alcoholics as handicapped individuals eligible for rehabilitation services under the Vocational Rehabilitation Act.

The Secretary wishes to reassure recipients that inclusion of addicts and alcoholics within the scope of the regulation will not lead to the consequences feared by many commenters. It cannot be emphasized too strongly that the statute and the regulation apply only to discrimination against qualified handicapped persons solely by reason of their handicap. The fact that drug addiction and alcoholism may be handicaps does not mean that these conditions must be ignored in determining whether an individual is qualified for services or employment opportunities. On the contrary, a recipient may hold a drug addict or alcoholic to the same standard of performance and behavior to which it holds others, even if any unsatisfactory performance or behavior is related to the person's drug addiction or alcoholism. In other words, while an alcoholic or drug addict may not be denied services or disqualified from employment solely because of his or her condition, the behavioral manifestations of the condition may be taken into account in determining whether he or she is qualified.

With respect to the employment of a drug addict or alcoholic, if it can be shown that the addiction or alcoholism prevents successful performance of the job, the person need not be provided the employment opportunity in question. For example, in making employment decisions, a recipient may judge addicts and alcoholics on the same basis it judges all other applicants and employees. Thus, a recipient may consider—in all applicants including drug addicts and alcoholics—past personnel records, absenteeism, disruptive, abusive, or dangerous behavior, violations of rules and unsatisfactory work performance. Moreover, employers may enforce rules prohibiting the possession or use of alcohol or drugs in the work-place, provided that such rules are enforced against all employees.

With respect to other services, the implications of coverage of alcoholics and drug addicts are two-fold: first, no person may be excluded from services solely by

reason of the presence or history of those conditions; second, to the extent that the manifestations of the condition prevent the person from meeting the basic eligibility requirements of the program or cause substantial interference with the operation of the program, the condition may be taken into consideration. Thus, a college may not exclude an addict or alcoholic as a student, on the basis of addiction or alcoholism, if the person can successfully participate in the education program and comply with the rules of the college and if his or her behavior does not impede the performance of other students.

Of great concern to many commenters was the question of what effect the inclusion of drug addicts and alcoholics as handicapped persons would have on school disciplinary rules prohibiting the use or possession of drugs or alcohol by students. Neither such rules nor their application to drug addicts or alcoholics is prohibited by this regulation, provided that the rules are enforced evenly with respect to all students.

5. "Qualified handicapped person." Paragraph (k) of § 104.3 defines the term "qualified handicapped person." Throughout the regulation, this term is used instead of the statutory term "otherwise qualified handicapped person." The Department believes that the omission of the word "otherwise" is necessary in order to comport with the intent of the statute because, read literally, "otherwise" qualified handicapped persons include persons who are qualified except for their handicap, rather than in spite of their handicap. Under such a literal reading, a blind person possessing all the qualifications for driving a bus except sight could be said to be "otherwise qualified" for the job of driving. Clearly, such a result was not intended by Congress. In all other respects, the terms "qualified" and "otherwise qualified" are intended to be interchangeable.

Section 104.3(k)(1) defines a qualified handicapped person with respect to employment as a handicapped person who can, with reasonable accommodation, perform the essential functions of the job in question. The term "essential functions" does not appear in the corresponding provision of the Department of Labor's section 303 regulation, and a few commenters objected to its inclusion on the ground that a handicapped person should be able to perform all job tasks. However, the Department believes that inclusion of the phrase is useful in emphasizing that handicapped persons should not be disqualified simply because they may have difficulty in performing tasks that bear only a marginal relationship to a particular job. Further, we are convinced that inclusion of the phrase is not inconsistent with the Department of Labor's application of its definition.

Certain commenters urged that the definition of qualified handicapped person be amended so as explicitly to place upon the employer the burden of showing that a particular mental or physical characteristic is essential. Because the same result is achieved by the requirement contained in paragraph (a) of § 104.12, which requires an

employer to establish that any selection criterion that tends to screen out handicapped persons is job-related, that recommendation has not been followed.

Section 104.3(k)(2) defines qualified handicapped person, with respect to preschool, elementary, and secondary programs, in terms of age. Several commenters recommended that eligibility for the services be based upon the standard of substantial benefit, rather than age, because of the need of many handicapped children for early or extended services if they are to have an equal opportunity to benefit from education programs. No change has been made in this provision, again because of the extreme difficulties in administration that would result from the choice of the former standard. Under the remedial action provisions of § 104.3(k)(3), however, persons beyond the age limits prescribed in § 104.3(k)(2) may in appropriate cases be required to be provided services that they were formerly denied because of a recipient's violation of section 104.

Section 104.3(k)(2) states that a handicapped person is qualified for preschool, elementary, or secondary services if the person is of an age at which nonhandicapped persons are eligible for such services or at which state law mandates the provision of educational services to handicapped persons. In addition, the extended age ranges for which recipients must provide full educational opportunity to all handicapped persons in order to be eligible for assistance under the Education of the Handicapped Act—generally, 3-18 as of September 1978, and 3-21 as of September 1980 are incorporated by reference in this paragraph.

Section 104.3(k)(3) defines qualified handicapped person with respect to postsecondary educational programs. As revised, the paragraph means that both academic and technical standards must be met by applicants to these programs. The term "technical standards" refers to all nonacademic admissions criteria that are essential to participation in the program in question.

6. General prohibitions against discrimination. Section 104.4 contains general prohibitions against discrimination applicable to all recipients of assistance from this Department.

Paragraph (b)(1)(i) prohibits the exclusion of qualified handicapped persons from aids, benefits, or services, and paragraph (ii) requires that equal opportunity to participate or benefit be provided. Paragraph (iii) requires that services provided to handicapped persons be as effective as those provided to the nonhandicapped. In paragraph (iv), different or separate services are prohibited except when necessary to provide equally effective benefits.

In this context, the term "equally effective," defined in paragraph (b)(2), is intended to encompass the concept of equivalent, as opposed to identical, services and to acknowledge the fact that in order to meet the individual needs of handicapped persons to the same extent that the corresponding needs of nonhandicapped persons are met, adjustments to regular programs or the

provision of different programs may sometimes be necessary. This standard precludes the use established under title VI of Civil Rights Act of 1964 with respect to the provision of educational services to students whose primary language is not English. See *Law v. Nichols*, 414 U.S. 623 (1974). To be equally effective, however, an aid, benefit, or service need not produce equal results; it merely must afford an equal opportunity to achieve equal results.

It must be emphasized that, although separate services must be required in some instances, the provision of unnecessarily separate or different services is discriminatory. The addition to paragraph (b)(2) of the phrase "in the most integrated setting appropriate to the person's needs" is intended to reinforce this general concept. A new paragraph (b)(3) has also been added to § 104.4, requiring recipients to give qualified handicapped persons the option of participating in regular programs despite the existence of permissibly separate or different programs. The requirement has been reiterated in §§ 104.38 and 104.47 in connection with physical education and athletics programs.

Section 104.4(b)(1)(v) prohibits a recipient from supporting another entity or person that subjects participants or employees in the recipient's program to discrimination on the basis of handicap. This section would, for example, prohibit financial support by a recipient to a community recreational group or to a professional or social organization that discriminates against handicapped persons. Among the criteria to be considered in each case are the substantiality of the relationship between the recipient and the other entity, including financial support by the recipient, and whether the other entity's activities relate so closely to the recipient's program or activity that they fairly should be considered activities of the recipient itself. Paragraph (b)(1)(vi) was added in response to comment in order to make explicit the prohibition against denying qualified handicapped persons the opportunity to serve on planning and advisory boards responsible for guiding federally assisted programs or activities.

Several comments appeared to interpret § 104.4(b)(5), which proscribes discriminatory site selection, to prohibit a recipient that is located on hilly terrain from erecting any new buildings at its present site. That, of course, is not the case. This paragraph is not intended to apply to construction of additional buildings at an existing site. Of course, any such facilities must be made accessible in accordance with the requirements of § 104.23.

7. Assurances of compliance. Section 104.5(a) requires a recipient to submit to the Assistant Secretary an assurance that each of its programs and activities receiving or benefiting from Federal financial assistance from this Department will be conducted in compliance with this regulation. Many commenters also sought relief from the paperwork requirements imposed by the Department's enforcement of its various civil rights responsibilities by requesting the Department to issue one form incorporating title VI, title IX, and section 504 assurances. The Secretary is sympathetic to this request.

While it is not feasible to adopt a strict divvied rights assurance form at this time, the Office for Civil Rights will work toward that goal.

8. Private right of action. Several comments urged that the regulation incorporate provision granting beneficiaries a private right of action against recipients under section 504. To confer such a right is beyond the authority of the executive branch of Government. There is, however, case law holding that such a right exists. *Lloyd v. Regional Transportation Authority*, 548 F.2d 1277 (7th Cir. 1977); see *Heirston v. Dresick*, Civil No. 73-0891 (S.D. W. Va., Jan. 14, 1978); *Gurman/A v. Costanza*, 413 F. Supp. 942 (D.D. Pa. 1978); cf. *Low v. Nichols*, *supra*.

9. Remedial action. Where there has been a finding of discrimination, § 104.8 requires a recipient to take remedial action to overcome the effects of the discrimination. Action that might be required under paragraph (a)(3) include a provision of services to persons previously discriminated against, reinstatement of employees and development of a remedial action plan. Should a recipient fail to take required remedial action, the ultimate sanctions of court action or termination of Federal financial assistance may be imposed.

Paragraph (a)(2) extends the responsibility for taking remedial action to a recipient that exercises control over a noncomplying recipient. Paragraph (a)(3) also makes clear that handicapped persons who are not in the program at the time that remedial action is required to be taken may also be the subject of such remedial action. This paragraph has been revised in response to comments in order to include persons who would have been in the program if discriminatory practices had not existed. Paragraphs (a)(1), (2), and (3) have also been amended in response to comments to make plain that, in appropriate cases, remedial action might be required to redress clear violations of the statute itself that occurred before the effective date of this regulation.

10. Voluntary action. In § 104.8(b), the term "voluntary action" has been substituted for the term "affirmative action" because the use of the latter term led to some confusion. We believe the term "voluntary action" more accurately reflects the purpose of the paragraph. This provision allows action, beyond that required by the regulation, to overcome conditions that led to limited participation by handicapped persons, whether or not the limited participation was caused by any discriminatory actions on the part of the recipient. Several commenters urged that paragraphs (a) and (b) be revised to require remedial action to overcome effects of prior discriminatory practices regardless of whether there has been an express finding of discrimination. The self-evaluation requirement in paragraph (c) accomplishes much the same purpose.

11. Self-evaluation. Paragraph (c) requires recipients to conduct a self-evaluation in order to determine whether their policies or practices may discriminate against handicapped persons and to take steps to modify any discriminatory policies and practices and their effects. The Department received many comments approving of the addition to paragraph (c) of a requirement

that recipients seek the assistance of handicapped persons in the self-evaluation process. This paragraph has been further amended to require consultation with handicapped persons or organizations representing them before recipients undertake the policy modifications and remedial steps prescribed in paragraphs (c)(II) and (III).

Paragraph (c)(2), which sets forth the recordkeeping requirements concerning self-evaluation, now applies only to recipients with fifteen or more employees. This change was made as part of an effort to reduce unnecessary or counterproductive administrative obligations on small recipients. For those recipients required to keep records, the requirements have been made more specific; records must include a list of persons consulted and a description of areas examined, problems identified, and corrective steps taken. Moreover, the records must be made available for public inspection.

12. Grievance procedure. Section 104.7 requires recipients with fifteen or more employees to designate an individual responsible for coordinating its compliance efforts and to adopt a grievance procedure. Two changes were made in the section in response to comment. A general requirement that appropriate due process procedures be followed has been added. It was decided that the details of such procedures could not at this time be specified because of the varied nature of the persons and entities who must establish the procedures and of the programs to which they apply. A sentence was also added to make clear that grievance procedures are not required to be made available to unsuccessful applicants for employment or to applicants for admission to colleges and universities.

The regulation does not require that grievance procedures be exhausted before recourse is sought from the Department. However, the Secretary believes that it is desirable and efficient in many cases for complainants to seek resolution of their complaints and disputes at the local level and therefore encourages them to use available grievance procedures.

A number of comments asked whether compliance with this section or the notice requirements of § 104.8 could be coordinated with comparable action required by the title IX regulation. The Department encourages such efforts.

13. Notice. Section 104.8 (formerly § 44.8) sets forth requirements for dissemination of statements of nondiscrimination policy by recipients.

It is important that both handicapped persons and the public at large be aware of the obligations of recipients under section 504. Both the Department and recipients have responsibilities in this regard. Indeed the Department intends to undertake a major public information effort to inform persons of their rights under section 504 and this regulation. In § 104.8 the Department has sought to impose a clear obligation on major recipients to notify beneficiaries and employers of the requirements of section 504, without dictating the precise way in which this notice must be given. At the same time, we have avoided imposing requirements on

small recipients (those with fewer than fifteen employees) that would create unnecessary and counterproductive paper work burdens on them and unduly stretch the enforcement resources of the Department.

Section 104.8(a), as amended, requires recipients with fifteen or more employees to take appropriate steps to notify beneficiaries and employees of the recipient's obligations under section 504. The last sentence of § 104.8(a) has been revised to list possible, rather than required, means of notification. Section 104.8(c) requires recipients to include a notification of their policy of nondiscrimination in recruitment and other general information materials.

In response to a number of comments, § 104.8 has been revised to delete the requirements of publication in local newspapers, which has proved to be both troublesome and ineffective. Several commenters suggested that notification on separate forms be allowed until present stocks of publications and forms are depleted. The final regulation explicitly allows this method of compliance. The separate form should, however, be included with each significant publication or form that is distributed.

§ 104 which prohibited the use of materials that might give the impression that a recipient excludes qualified handicapped persons from its program, has been deleted. The Department is convinced by the comments that this provision is unnecessary and difficult to apply. The Department encourages recipients, however, to include in their recruitment and other general information materials photographs of handicapped persons and ramps and other features of accessible buildings.

Under new § 104.8 the Assistant Secretary may, under certain circumstances, require recipients with fewer than fifteen employees to comply with one or more of these requirements. Thus, if experience shows a need for imposing notice or other requirements on particular recipients or classes of small recipients, the Department is prepared to expand the coverage of these sections.

14. Inconsistent State laws. Section 104.10(a) states that compliance with the regulation is not excused by state or local laws limiting the eligibility of qualified handicapped persons to receive services or to practice an occupation. The provision thus applies only with respect to state or local laws that unjustifiably differentiate on the basis of handicap.

Paragraph (b) further points out that the presence of limited employment opportunities in a particular profession, does not excuse a recipient from complying with the regulation. Thus, a law school could not deny admission to a blind applicant because blind lawyers may find it more difficult to find jobs than do nonhandicapped lawyers.

Subpart B—Employment Practices

Subpart B prescribes requirements for nondiscrimination in the employment practices of recipients of Federal financial assistance administered by the Department. This subpart is consistent with the employment provisions of the Department's

regulation implementing title IX of the Education Amendments of 1972 (34 CFR Part 108) and the regulation of the Department of Labor under section 503 of the Rehabilitation Act, which requires certain Federal contractors to take affirmative action in the employment and advancement of qualified handicapped persons. All recipients subject to title IX are also subject to this regulation. In addition, many recipients subject to this regulation receive Federal procurement contracts in excess of \$1,500 and are therefore also subject to section 302.

15. Discriminatory practices. Section 104.11 sets forth general provisions with respect to discrimination in employment. A new paragraph (e)(2) has been added to clarify the employment obligations of recipients that receive Federal funds under Part B of the Education of the Handicapped Act, as amended (EHA). Section 606 of the EHA obligates elementary or secondary school systems that receive EHA funds to take positive steps to employ and advance in employment qualified handicapped persons. This obligation is similar to the nondiscrimination requirement of section 504 but requires recipients to take additional steps to hire and promote handicapped persons. In enacting section 606 Congress chose the words "positive steps" instead of "affirmative action" advisedly and did not intend section 606 to incorporate the types of activities required under Executive Order 11246 (affirmative action on the basis of race, color, sex, or national origin) or under sections 501 and 503 of the Rehabilitation Act of 1973.

Paragraph (b) of § 104.11 sets forth the specific aspects of employment covered by the regulation. Paragraph (c) provides that inconsistent provisions of collective bargaining agreements do not entitle noncompliance.

16. Reasonable accommodation. The reasonable accommodation requirement of § 104.12 generated a substantial number of comments. The Department remains convinced that its approach is both fair and effective. Moreover, the Department of Labor reports that it has experienced little difficulty in administering the requirements of reasonable accommodation. The provision therefore remains basically unchanged from the proposed regulation.

Section 104.12 requires a recipient to make reasonable accommodation to the known physical or mental limitations of a handicapped applicant or employee unless the recipient can demonstrate that the accommodation would impose an undue hardship on the operation of its program. Where a handicapped person is not qualified to perform a particular job, where reasonable accommodation does not overcome the effects of a person's handicap, or where reasonable accommodation causes undue hardship to the employer, failure to hire or promote the handicapped person will not be considered discrimination.

Section 104.12(b) lists some of the actions that constitute reasonable accommodation. The list is neither all-inclusive nor meant to suggest that employers must follow all of the actions listed.

Reasonable accommodation includes modification of work schedules, including

part-time employment, and job restructuring. Job restructuring may entail shifting nonessential duties to other employees. In other cases, reasonable accommodation may include physical modifications or relocation of particular offices or jobs so that they are in facilities or parts of facilities that are accessible to and usable by handicapped persons. If such accommodations would cause undue hardship to the employer, they need not be made.

Paragraph (c) of this section sets forth the factors that the Office for Civil Rights will consider in determining whether an accommodation necessary to enable an applicant or employee to perform the duties of a job would impose an undue hardship. The weight given to each of these factors in making the determination as to whether an accommodation constitutes undue hardship will vary depending on the facts of a particular situation. Thus, a small day-care center might not be required to expend more than a nominal sum, such as that necessary to equip a telephone for use by a secretary with impaired hearing, but a large school district might be required to make available a teacher's aide to a blind applicant for a teaching job. The reasonable accommodation standard in § 104.12 is similar to the obligation imposed upon Federal contractors in the regulation implementing section 503 of the Rehabilitation Act of 1973, administered by the Department of Labor. Although the wording of the reasonable accommodation provisions of the two regulations is not identical, the obligation that the two regulations impose is the same, and the Federal Government's policy in implementing the two sections will be uniform. The Department adopted the factors listed in paragraph (c) instead of the "business necessity" standard of the Labor regulation because that term seemed inappropriate to the nature of the programs operated by the majority of institutions subject to this regulation, e.g., public school systems, colleges and universities. The factors listed in paragraph (c) are intended to make the rationale underlying the business necessity standard applicable to an understandable by recipients of ED funds.

17. Tests and selection criteria. Revised § 104.13(a) prohibits employers from using test or other selection criteria that screen out or tend to screen out handicapped persons unless the test or criterion is shown to be job-related and alternative tests or criteria that do not screen out or tend to screen out as many handicapped persons are not shown by the Assistant Secretary to be available. This paragraph is an application of the principle established under title VII of the Civil Rights Act of 1964 in *Griggs v. Duke Power Company*, 401 U.S. 421 (1971).

Under the proposed regulation, a showing of adverse impact on handicapped persons was required to trigger an employer's obligation to show that employment criteria and qualifications relating to handicap were necessary. This requirement was changed because the small number of handicapped persons taking tests would make statistical showings of "disproportionate, adverse effect" difficult and burdensome. Under the altered, more workable provision, once it is

shown that an employment test substantially limits the opportunities of handicapped persons, the employer must show the test to be job-related. A recipient is no longer limited to using predictive validity studies as the method for demonstrating that a test or other selection criterion is in fact job-related. Nor, in all cases, are predictive validity studies sufficient to demonstrate that a test or criterion is job-related. In addition, § 104.13(a) has been revised to place the burden on the Assistant Secretary, rather than the recipient, to identify alternate tests.

Section 104.13(b) requires that a recipient take into account that some tests and criteria depend upon sensory, manual, or speaking skills that may not themselves be necessary to the job in question but that may make the handicapped person unable to pass the test. The recipient must select and administer tests so as best to ensure that the test will measure the handicapped person's ability to perform on the job rather than the person's ability to see, hear, speak, or perform manual tasks, except of course, where such skills are the factors that the test purports to measure. For example, a person with a speech impediment may be perfectly qualified for jobs that do not or need not, with reasonable accommodation, require ability to speak clearly. Yet, if given an oral test, the person will be unable to perform in a satisfactory manner. The test results will not, therefore, predict job performance but instead will reflect impaired speech.

18. Preemployment inquiries. Section 104.14, concerning preemployment inquiries, generated a large number of comments. Commenters representing handicapped persons strongly favored a ban on preemployment inquiries on the ground that such inquiries are often used to discriminate against handicapped persons and are not necessary to serve any legitimate interests of employers. Some recipients, on the other hand, argued that preemployment inquiries are necessary to determine qualifications of the applicant; safety hazards caused by a particular-handicapping condition, and accommodations that might be required.

The Secretary has concluded that a general prohibition of preemployment inquiries is appropriate. However, a sentence has been added to paragraph (a) to make clear that an employer may inquire into an applicant's ability to perform job-related tasks but may not ask if the person has a handicap. For example, an employer may not ask on an employment form if an applicant is visually impaired but may ask if the person has a current driver's license (if that is a necessary qualification for the position in question). Similarly, employers may make inquiries about an applicant's ability to perform a job safely. Thus, an employer may not ask if an applicant is an epileptic but may ask whether the person can perform a particular job without endangering other employees.

Section 104.14(b) allows preemployment inquiries only if they are made in conjunction with required remedial action to correct past discrimination, with voluntary action to overcome past conditions that have limited the participation of handicapped persons, or with obligations under section 503 of the Rehabilitation Act of 1973. In those instances,

paragraph (b) specifies certain safeguards that must be followed by the employer.

Finally, the revised provision allows an employer to condition offers of employment to handicapped persons on the results of medical examinations, so long as the examinations are administered to all employees in a nondiscriminatory manner and the results are treated on a confidential basis.

18. Specific acts of Discrimination. Sect. 104.15 (recruitment), 104.16 (compensation), 104.17 (job classification and structure) and 104.18 (fringe benefits) have been deleted from the regulation as unnecessarily duplicative of § 104.11 (discrimination prohibited). The deletion of these sections in no way changes the substantive obligations of employers subject to this regulation from those set forth in the July 18 proposed regulation. These deletions bring the regulation closer in form to the Department of Labor's section 503 regulation.

A proposed section, concerning fringe benefits, had allowed for differences in benefits or contributions between handicapped and nonhandicapped persons in situations only where such differences could be justified on an equatorial basis. Section 104.11 simply bars discrimination in providing fringe benefits and does not address the issue of equatorial differences. The Department believes that currently available data and experience do not demonstrate a basis for promulgating a regulation specifically allowing for differences in benefits or contributions.

Subpart C—Program Accessibility

In general, Subpart C prohibits the exclusion of qualified handicapped persons from federally assisted programs or activities because a recipient's facilities are inaccessible or unusable.

20. Existing facilities. Section 104.22 maintains the same standard for nondiscrimination in regard to existing facilities as was included in the proposed regulation. The section states that a recipient's program or activity, when viewed in its entirety, must be readily accessible to and usable by handicapped persons. Paragraphs (a) and (b) make clear that a recipient is not required to make each of its existing facilities accessible to handicapped persons if its program as a whole is accessible. Accessibility to the recipient's program or activity may be achieved by a number of means, including redesign of equipment, reassignment of classes or other services to accessible buildings, and making aides available to beneficiaries. In choosing among methods of compliance, recipients are required to give priority consideration to methods that will be consistent with provision of services in the most appropriate integrated setting. Structural changes in existing facilities are required only where there is no other feasible way to make the recipient's program accessible.

Under § 104.22, a university does not have to make all of its existing classroom buildings accessible to handicapped students if some of its buildings are already accessible and if it is possible to reschedule or relocate enough classes so as to offer all required courses and

a reasonable selection of elective courses in accessible facilities. If sufficient relocation of classes is not possible using existing facilities, enough alterations to ensure program accessibility are required. A university may not exclude a handicapped student from a specifically requested course offering because it is not offered in an accessible location, but it need not make every section of that course accessible.

Comments representing several institutions of higher education have suggested that it would be appropriate for one postsecondary institution in a geographical area to be made accessible to handicapped persons and for other colleges and universities in that area to participate in that school's program, thereby developing an educational consortium for the postsecondary education of handicapped students. The Department believes that such a consortium, when developed and applied only to handicapped persons, would not constitute compliance with § 104.22, but would discriminate against qualified handicapped persons by restricting their choice in selecting institutions of higher education and would, therefore, be inconsistent with the basic objectives of the statute.

Nothing in this regulation, however, should be read as prohibiting institutions from forming consortia for the benefit of all students. Thus, if three colleges decide that it would be cost-efficient for one college to offer biology, the second physics, and the third chemistry to all students at the three colleges, the arrangement would not violate section 504. On the other hand, it would violate the regulation if the same institutions set up a consortium under which one college undertook to make its biology lab accessible, another its physics lab, and a third its chemistry lab, and under which mobility-impaired handicapped students (but not other students) were required to attend the particular college that is accessible for the desired course.

Similarly, while a public school district need not make each of its buildings completely accessible, it may not make only one facility or part of a facility accessible if the result is to segregate handicapped students in a single setting.

All recipients that provide health, welfare, or other social services may also comply with § 104.22 by delivering services at alternate accessible sites or making home visits. Thus, for example, a pharmacist might arrange to make home deliveries of drugs. Under revised § 104.22(c), small providers of health, welfare, and social services (those with fewer than fifteen employees) may refer a beneficiary to an accessible provider of the desired service, but only if no means of meeting the program accessibility requirement other than a significant alteration in existing facilities is available. The referring recipient has the responsibility of determining that the other provider is in fact accessible and willing to provide the service.

A recent change in the tax law may assist some recipients in meeting their obligations under this section. Under section 2122 of the Tax Reform Act of 1978, recipients that pay federal income tax are eligible to claim a tax deduction of up to \$25,000 for architectural

and transportation modifications made to improve accessibility for handicapped persons. See 43 FR 17870 (April 4, 1978), adopting 25 CFR 7.100.

Several commenters expressed concern about the feasibility of compliance with the program accessibility standard. The Secretary believes that the standard is flexible enough to permit recipients to devise ways to make their programs accessible short of extremely expensive or impractical physical changes in facilities. Accordingly, the section does not allow for waivers. The Department is ready at all times to provide technical assistance to recipients in meeting their program accessibility responsibilities. For this purpose, the Department is establishing a special technical assistance unit. Recipients are encouraged to call upon the unit staff for advice and guidance both on structural modifications and on other ways of meeting the program accessibility requirement.

Paragraph (d) has been amended to require recipients to make all nonstructural adjustments necessary for meeting the program accessibility standard within sixty days. Only where structural changes in facilities are necessary will a recipient be permitted up to three years to accomplish program accessibility. It should be emphasized that the three-year time period is not a waiting period and that all changes must be accomplished as expeditiously as possible. Further, it is the Department's belief, after consultation with experts in the field, that outside ramps to buildings can be constructed quickly and at relatively low cost. Therefore, it will be expected that such structural additions will be made promptly to comply with § 104.22(d).

The regulation continues to provide, as did the proposed version, that a recipient planning to achieve program accessibility by making structural changes must develop a transition plan for such changes within six months of the effective date of the regulation. A number of commenters suggested extending that period to one year. The Secretary believes that such an extension is unnecessary and unwarranted. Planning for any necessary structural changes should be undertaken promptly to ensure that they can be completed within the three-year period. The elements of the transition plan as required by the regulation remain virtually unchanged from the proposal but § 104.22(d) now includes a requirement that the recipient make the plan available for public inspection.

Several commenters expressed concern that the program accessibility standard would result in the segregation of handicapped persons in educational institutions. The regulation will not be applied to permit such a result. See § 104.4(c)(3)(iv), prohibiting unnecessarily separate treatment; § 104.36, requiring that students in elementary and secondary schools be educated in the most integrated setting appropriate to their needs; and new § 104.43(d), applying the same standard to postsecondary education.

We have received some comments from organizations of handicapped persons on the subject of requiring, over an extended period of time, a barrier-free environment—that is,

requiring the removal of all architectural barriers in existing facilities. The Department has considered these comments but has decided to take no further action on this issue concerning these suggestions, believing that such action should only be considered in light of experience in implementing the program accessibility standard.

22. New construction. Section 104.23 requires that all new facilities, as well as alterations that could affect access to and use of existing facilities, be designed and constructed in a manner so as to make the facility accessible to and usable by handicapped persons. Section 104.23(a) has been amended so that it applies to each newly constructed facility if the construction was commenced after the effective date of the regulation. The words "if construction has commenced" will be considered to mean "if groundbreaking has taken place." Thus, a recipient will not be required to alter the design of a facility that has progressed beyond groundbreaking prior to the effective date of the regulation.

Paragraph (b) requires certain alterations to conform to the requirement of physical accessibility in paragraph (a). If an alteration is undertaken to a portion of a building the accessibility of which could be improved by the manner in which the alteration is carried out, the alteration must be made in that manner. Thus, if a doorway or wall is being altered, the door or other wall opening must be made wide enough to accommodate wheelchairs. On the other hand, if the alteration consists of altering ceilings, the provisions of this section are not applicable because this alteration cannot be done in a way that affects the accessibility of that portion of the building. The phrase "to the maximum extent feasible" has been added to allow for the occasional case in which the nature of an existing facility is, such as to make it impractical or prohibitively expensive to renovate the building in a manner that results in its being entirely barrier-free. In all such cases, however, the alteration should provide the maximum amount of physical accessibility feasible.

As proposed, § 104.23(c) required compliance with the American National Standards Institute (ANSI) standard on building accessibility as the minimum necessary for compliance with the accessibility requirement of §§ 104.23 (a) and (b). The reference to the ANSI standard created some ambiguity, since the standard itself provides for waivers where other methods are equally effective in providing accessibility to the facility. Moreover, the Secretary does not wish to discourage innovation in barrier-free construction by requiring absolute adherence to a rigid design standard. Accordingly, § 104.23 (c) has been revised to permit departures from particular requirements of the ANSI standard where the recipient can demonstrate that equivalent access to the facility is provided.

Section 104.23(d) of the proposed regulation, providing for a limited deferral of action concerning facilities that are subject to section 502 as well as section 504 of the Act, has been deleted. The Secretary believes that the provision is unnecessary and

inappropriate to this regulation. The Department will, however, seek to coordinate enforcement activities under this regulation with those of the Architectural and Transportation Barriers Compliance Board.

Subpart D—Preschool, Elementary, and Secondary Education

Subpart D sets forth requirements for nondiscrimination in preschool, elementary, secondary, and adult education programs and activities, including secondary vocational education programs. In this context, the term "adult education" refers only to those educational programs and activities for adults that are operated by elementary and secondary schools.

The provisions of Subpart D apply to state and local educational agencies. Although the subpart applies in general to both public and private education programs and activities that are federally assisted, §§ 104.22 and 104.23 apply only to public programs and § 104.28 applies only to private programs. §§ 104.25 and 104.28 apply both to public programs and to those private programs that include special services for handicapped students.

Subpart B generally conforms to the standards established for the education of handicapped persons in *Mills v. Board of Education of the District of Columbia*, 348 F. Supp. 866 (D.D.C. 1972), *Pennsylvania Association for Retarded Children v. Commonwealth of Pennsylvania*, 344 F. Supp. 1257 (E.D. 1972), 343 F. Supp. 278 (E.D. Pa. 1972), and *Lebanon v. Spears*, 60 F.R.D. 138 (E.D. La. 1973), as well as in the Education of the Handicapped Act, as amended by Public Law 94-142 (the EHA).

The basic requirements common to those cases, to the EHA, and to this regulation are (1) that handicapped persons, regardless of the nature or severity of their handicap, be provided a free appropriate public education, (2) that handicapped students be educated with nonhandicapped students to the maximum extent appropriate to their needs, (3) that educational agencies undertake to identify and locate all unserved handicapped children, (4) that evaluation procedures be improved in order to avoid the inappropriate education that results from the misclassification of students, and (5) that procedural safeguards be established to enable parents and guardians to influence decisions regarding the evaluation and placement of their children. These requirements are designed to ensure that no handicapped child is excluded from school on the basis of handicap and, if a recipient demonstrates that placement in a regular educational setting cannot be achieved satisfactorily, that the student is provided with adequate alternative services suited to the student's needs without additional cost to the student's parents or guardian. Thus, a recipient that operates a public school system must either educate handicapped children in its regular program or provide such children with an appropriate alternative education at public expense.

It is not the intention of the Department, except in extraordinary circumstances, to review the result of individual placement and other educational decisions, so long as the

school district complies with the "process" requirements of this subpart (concerning identification and location, evaluation, and due process procedures). However, the Department will place a high priority on investigating cases which may involve exclusion of a child from the education system or a pattern or practice of discriminatory placements or education.

23. Location and notification. Section 104.22 requires public schools to take steps annually to identify and locate handicapped children who are not receiving an education and to publicize to handicapped children and their parents the rights and duties established by section 504 and this regulation. This section has been shortened without substantive change.

23. Free appropriate public education. Under § 104.23(a), a recipient is responsible for providing a free appropriate public education to each qualified handicapped person who is in the recipient's jurisdiction. The word "in" encompasses the concepts of both domicile and actual residence. If a recipient places a child in a program other than its own, it remains financially responsible for the child, whether or not the other program is operated by another recipient or educational agency. Moreover, a recipient may not place a child in a program that is inappropriate or that otherwise violates the requirements of Subpart D. And in no case may a recipient refuse to provide services to a handicapped child in its jurisdiction because of another person's or entity's failure to assume financial responsibility.

Section 104.23(b) concerns the provision of appropriate educational services to handicapped children. To be appropriate, such services must be designed to meet handicapped children's individual educational needs to the same extent that those of nonhandicapped children are met. An appropriate education could consist of education in regular classes, education in regular classes with the use of supplementary services, or special education and related services. Special education may include specially designed instruction in classrooms, at home, or in private or public institutions and may be accompanied by such related services as developmental, corrective, and other supportive services (including psychological, counseling, and medical diagnostic services). The placement of the child must however, be consistent with the requirements of § 104.24 and be suited to his or her educational needs.

The quality of the educational services provided to handicapped students must equal that of the services provided to nonhandicapped students; thus, handicapped students' teachers must be trained in the instruction of persons with the handicap in question and appropriate materials and equipment must be available. The Department is aware that the supply of adequately trained teachers may, at least at the outset of the imposition of this requirement, be insufficient to meet the demand of all recipients. This factor will be considered in determining the appropriateness of the remedy for noncompliance with this section. A new

§ 104.33(b)(2) has been added, which allows this requirement to be met through the full implementation of an individualized education program developed in accordance with the standards of the EHA.

Paragraph (c) of § 104.33 sets forth the specific financial obligations of a recipient. If a recipient does not itself provide handicapped persons with the requisite services, it must assume the cost of any alternate placement. If, however, a recipient offers adequate services and if alternate placement is chosen by a student's parent or guardian, the recipient need not assume the cost of the outside services. (If the parent or guardian believes that his or her child cannot be suitably educated in the recipient's program, he or she may make use of the procedures established in § 104.34.) Under this paragraph, a recipient's obligation extends beyond the provision of tuition payments in the case of placement outside the regular program. Adequate transportation must also be provided. Recipients must also pay for psychological services and those medical services necessary for diagnosis and evaluative purposes.

If the recipient places a student, because of his or her handicap, in a program that necessitates his or her being away from home, the payments must also cover room and board and nonmedical care (including custodial and supervisory care). When residential care is necessitated not by the student's handicap but by factors such as the student's home conditions, the recipient is not required to pay the cost of room and board.

Two new sentences have been added to paragraph (c)(1) to make clear that a recipient's financial obligations need not be met solely through its own funds. Recipients may rely on funds from any public or private source including insurers and similar third parties.

The EHA requires a free appropriate education to be provided to handicapped children "no later than September 1, 1978," but section 504 contains no authority for delaying enforcement. To resolve this problem, a new paragraph (d) has been added to § 104.33. Section 104.33(d) requires recipients to achieve full compliance with the free appropriate public education requirements of § 104.33 as expeditiously as possible, but in no event later than September 1, 1978. The provision also makes clear that, as of the effective date of this regulation, no recipient may exclude a qualified handicapped child from its educational program. This provision against exclusion is consistent with the order of providing services set forth in section 12(3) of the EHA, which places the highest priority on providing services to handicapped children who are not receiving an education.

24. Educational setting. Section 104.34 prescribes standards for educating handicapped persons with nonhandicapped persons to the maximum extent appropriate to the needs of the handicapped person in question. A handicapped student may be removed from the regular educational setting only where the recipient can show that the needs of the student would, on balance, be served by placement in another setting.

Although under § 104.34, the needs of the handicapped person are determinative as to

proper placement, it should be stressed that, where a handicapped student is so disruptive in a regular classroom that the education of other students is significantly impaired, the needs of the handicapped child cannot be met in that environment. Therefore, regular placement would not be appropriate to his or her needs and would not be required by § 104.34.

Among the factors to be considered in placing a child is the need to place the child as close to home as possible. A new sentence has been added to paragraph (a) requiring recipients to take this factor into account. As pointed out in several comments, the parents' right under § 104.36 to challenge the placement of their child extends not only to placement in special classes or separate schools but also to placement in a distant school and, in particular, to residential placement. An equally appropriate educational program may exist closer to home; this issue may be raised by the parent or guardian under §§ 104.34 and 104.36.

New paragraph (b) specified that handicapped children must also be provided nonacademic services in an integrated setting as possible. This requirement is especially important for children whose educational needs necessitate their being solely with other handicapped children during most of each day. To the maximum extent appropriate, children in residential settings are also to be provided opportunities for participation with other children.

Section 104.34(c) requires that any facilities that are identifiable as being for handicapped students be comparable in quality to other facilities of the recipient. A number of comments objected to this section on the basis that it encourages the creation and maintenance of such facilities. This is not the intent of the provision. A separate facility violates section 504 unless it is indeed necessary to the provision of an appropriate education to certain handicapped students. In those instances in which such facilities are necessary (as might be the case, for example, for severely retarded persons), this provision requires that the educational services provided be comparable to those provided in the facilities of the recipient that are not identifiable as being for handicapped persons.

25. Evaluation and placement. Because the failure to provide handicapped persons with an appropriate education is so frequently the result of misclassification or misplacement, section 104.33(b)(1) makes compliance with its provisions contingent upon adherence to certain procedures designed to ensure appropriate classification and placement. These procedures, delineated in §§ 104.35 and 104.36, are concerned with testing and other evaluation methods and with procedural due process rights.

Section 104.35(e) requires that an individual evaluation be conducted before any action is taken with respect either to the initial placement of a handicapped child in a regular or special education program or to any subsequent significant change in that placement. Thus, a full reevaluation is not required every time an adjustment in placement is made. "Any action" includes denials of placement.

Paragraphs (b) and (c) of § 104.35 establishes procedures designed to ensure that children are not misclassified, unnecessarily labeled as being handicapped, or incorrectly placed because of inappropriate selection, administration, or interpretation of evaluation materials. This problem has been extensively documented in "Issues in the Classification of Children," a report by the Project on Classification of Exceptional Children, in which the HEW Interagency Task Force participated. The provisions of these paragraphs are aimed primarily at abuses in the placement process that result from misuse of, or undue or misplaced reliance on, standardized scholastic aptitude tests.

Paragraph (b) has been shortened but not substantively changed. The requirement in former subparagraph (1) that recipients provide and administer evaluation materials in the native language of the student has been deleted as unnecessary, since the same requirement already exists under title VI and is more appropriately covered under that statute. Subparagraphs (1) and (2) are, in general, intended to prevent misinterpretation and similar misuse of test scores and, in particular, to avoid undue reliance on general intelligence tests. Subparagraph (3) requires a recipient to administer tests to a student with impaired memory, manual, or speaking skills in whatever manner is necessary to avoid distortion of the test results by the impairment. Former subparagraph (4) has been deleted as unnecessarily repetitive of the other provisions of this paragraph.

Paragraph (c) requires a recipient to draw upon a variety of sources in the evaluation process so that the possibility of error in classification is minimized. In particular, it requires that all significant factors relating to the learning process, including adaptive behavior, be considered. (Adaptive behavior is the effectiveness with which the individual meets the standards of personal independence and social responsibility expected of his or her age and cultural group.) Information from all sources must be documented and considered by a group of persons, and the procedure must ensure that the child is placed in the most integrated setting appropriate.

The proposed regulation would have required a complete individual reevaluation of the student each year. The Department has concluded that it is inappropriate in the section 504 regulation to require full reevaluations on such a rigid schedule. Accordingly, § 104.35(c) requires periodic reevaluations and specifies that reevaluations in accordance with the EHA will constitute compliance. The proposed regulation implementing the EHA allows reevaluation at three-year intervals except under certain specified circumstances.

Under § 104.36, a recipient must establish a system of due process procedures to be afforded to parents or guardians before the recipient takes any action regarding the identification, evaluation, or educational placement of a person who, because of handicap, needs or is believed to need special education or related services. This section has been revised. Because the due

process procedures of the EHA, incorporated by reference in the proposed section 504 regulation, are inappropriate for some recipients not subject to that Act, the section now specifies minimum necessary procedures: notice, a right to inspect records, an impartial hearing with a right to representation by counsel, and a review procedure. The EHA procedures remain one means of meeting the regulation's due process requirements, however, and are recommended to recipients as a model.

26. Nonacademic services. Section 104.37 requires a recipient to provide nonacademic and extracurricular services and activities in such manner as is necessary to afford handicapped students unequal opportunity for participation. Because these services and activities are part of a recipient's education program, they must, in accordance with the provisions of § 104.34, be provided in the most integrated setting appropriate.

Revised paragraph (c)(2) does permit separation or differentiation with respect to the provision of physical education and athletics activities, but only if qualified handicapped students are also allowed the opportunity to compete for regular teams or participate in regular activities. Most handicapped students are able to participate in one or more regular physical education and athletics activities. For example, a student in a wheelchair can participate in regular archery courses, as can a deaf student in a wrestling course.

Finally, the one-year transition period provided in a proposed section was deleted in response to the almost unanimous objection of commenters to that provision.

27. Preschool and adult education. Section 104.38 prohibits discrimination on the basis of handicap in preschool and adult education programs. Former paragraph (b), which emphasized that compensatory programs for disadvantaged children are subject to section 504, has been deleted as unnecessary, since it is comprehended by paragraph (a).

28. Private education. Section 104.39 sets forth the requirements applicable to recipients that operate private education programs and activities. The obligations of these recipients have been changed in two significant respects: first, private schools are subject to the evaluation and due process provisions of the subpart only if they operate special education programs; second, under § 104.39(b), they may charge more for providing services to handicapped students than to nonhandicapped students to the extent that additional charges can be justified by increased costs.

Paragraph (a) of § 104.39 is intended to make clear that recipients that operate private education programs and activities are not required to provide an appropriate education to handicapped students with special educational needs if the recipient does not offer programs designed to meet those needs. Thus, a private school that has no program for mentally retarded persons is neither required to admit such a person into its program nor to arrange or pay for the provision of the person's education in another program. A private recipient without a special program for blind students, however, would not be permitted to exclude, on the

basis of blindness, a blind applicant who is able to participate in the regular program with minor adjustments in the manner in which the program is normally offered.

Subpart E—Postsecondary Education

Subpart E prescribes requirements for nondiscrimination in recruitment, admission, and treatment of students in postsecondary education programs and activities, including vocational education.

29. Admission and recruitment. In addition to a general prohibition of discrimination on the basis of handicap in § 104.42(a), the regulation delineates, in § 104.42(b), specific prohibitions concerning the establishment of limitations on admission of handicapped students, the use of tests or selection criteria, and preadmission inquiry. Several changes have been made in this provision.

Section 104.42(b) provides that postsecondary educational institutions may not use any test or criterion for admission that has a disproportionate, adverse effect on handicapped persons unless it has been validated as a predictor of academic success and alternate tests or criteria with a less disproportionate, adverse effect are shown by the Department to be available. There are two significant changes in this approach from the July 26 proposed regulation.

First, many commenters expressed concern that § 104.42(b)(2)(ii) could be interpreted to require a "global search" for alternate tests that do not have a disproportionate, adverse impact on handicapped persons. This was not the intent of the provision and, therefore, it has been amended to place the burden on the Assistant Secretary for Civil Rights, rather than on the recipient, to identify alternate tests.

Second, a new paragraph (d), concerning validity studies, has been added. Under the proposed regulation, overall success in an education program, not just first-year grades, was the criterion against which admissions tests were to be validated. This approach has been changed to reflect the comment of professional testing services that use of first year grades would be less disruptive of present practice and that periodic validity studies against overall success in the education program would be sufficient check on the reliability of first-year grades.

Section 104.42(b)(3) also requires a recipient to assure itself that admissions tests are selected and administered to applicants with impaired sensory, manual, or speaking skills in such manner as is necessary to avoid unfair distortion of test results. Methods have been developed for testing the aptitude and achievement of persons who are not able to take written tests or even to make the marks required for mechanically scored objective tests; in addition, methods for testing persons with visual or hearing impairments are available. A recipient, under this paragraph, must assure itself that such methods are used with respect to the selection and administration of any admissions tests that it uses.

Section 104.42(b)(3)(iii) has been amended to require that admissions tests be administered in facilities that, on the whole, are accessible. In this context, "on the whole" means that not all of the facilities

need be accessible so long as a sufficient number of facilities are available to handicapped persons.

Revised § 104.42(b)(4) generally prohibits preadmission inquiries as to whether an applicant has a handicap. The considerations that led to this revision are similar to those underlying the comparable revision of § 104.14 on preemployment inquiries. The regulation does, however, allow inquiries to be made, after admission but before enrollment, as to handicaps that may require accommodation.

New paragraph (c) parallels the section on preemployment inquiries and allows postsecondary institutions to inquire about applicants' handicaps before admission, subject to certain safeguards. The purpose of the inquiry is to take remedial action to correct past discrimination or to take voluntary action to overcome the limited participation of handicapped persons in postsecondary educational institutions.

Proposed § 104.42(c), which would have allowed different admissions criteria in certain cases for handicapped persons, was widely misinterpreted in comments from both handicapped persons and recipients. We have concluded that the section is unnecessary, and it has been deleted.

30. Treatment of students. Section 104.43 contains general provisions prohibiting the discriminatory treatment of qualified handicapped applicants. Paragraph (b) requires recipients to ensure that equal opportunities are provided to its handicapped students in education programs and activities that are not operated by the recipient. The recipient must be satisfied that the outside education program or activity as a whole is nondiscriminatory. For example, a college must ensure that discrimination on the basis of handicap does not occur in connection with teaching assignments of student teachers in elementary or secondary schools not operated by the college. Under the "as a whole" wording, the college could continue to use elementary or secondary school systems that discriminate if, and only if, the college's student teaching program, when viewed in its entirety, offered handicapped student teachers the same range and quality of choice in student teaching assignments afforded nonhandicapped students.

Paragraph (c) of this section prohibits a recipient from excluding qualified handicapped students from any course, course of study, or other part of its education program or activity. This paragraph is designed to eliminate the practice of excluding handicapped persons from specific courses and from areas of concentration because of factors such as ambulatory difficulties of the student or assumptions by the recipient that no job would be available in the area in question for a person with that handicap.

New paragraph (d) requires postsecondary institutions to operate their programs and activities so that handicapped students are provided services in the most integrated setting appropriate. Thus, if a college had several elementary physics classes and had moved one such class to the first floor of the science building to accommodate students in wheelchairs, it would be a violation of this

paragraph for the college to concentrate handicapped students with no mobility impairments in the same class.

31. Academic adjustments. Paragraph (e) of § 104.44 requires that a recipient make certain adjustments to academic requirements and practices that discriminate or have the effect of discriminating on the basis of handicap. This requirement, like its predecessor in the proposed regulation, does not obligate an institution to waive course or other academic requirements. But such institutions must accommodate those requirements to the needs of individual handicapped students. For example, an institution might permit an otherwise qualified handicapped student who is deaf to substitute an art appreciation or music history course for a required course in music appreciation or could modify the manner in which the music appreciation course is conducted for the deaf student. It should be stressed that academic requirements that can be demonstrated by the recipient to be essential to its program of instruction or to particular degrees need not be changed.

Paragraph (b) provides that postsecondary institutions may not impose rules that have the effect of limiting the participation of handicapped students in the education program. Such rules include prohibition of tape recorders or brailers in classrooms and dog guides in campus buildings. Several recipients expressed concern about allowing students to tape record lectures because the professor may later want to copyright the lectures. This problem may be solved by requiring students to sign agreements that they will not release the tape recording or transcription or otherwise hinder the professor's ability to obtain a copyright.

Paragraph (c) of this section, concerning the administration of course examinations to students with impaired sensory, manual, or speaking skills, parallels the regulation's provisions on admissions testing (§ 104.42(b)) and will be similarly interpreted.

Under § 104.44(d), a recipient must ensure that no handicapped student is subject to discrimination in the recipient's program because of the absence of necessary auxiliary educational aids. Colleges and universities expressed concern about the costs of compliance with this provision.

The Department emphasizes that recipients can usually meet this obligation by assisting students in using existing resources for auxiliary aids such as state vocational rehabilitation agencies and private charitable organizations. Indeed, the Department anticipates that the bulk of auxiliary aids will be paid for by state and private agencies, not by colleges or universities. In those circumstances where the recipient institution must provide the educational auxiliary aid, the institution has flexibility in choosing the methods by which the aids will be supplied. For example, some universities have used students to work with the institution's handicapped students. Other institutions have used existing private agencies that tape texts for handicapped students free of charge in order to reduce the number of readers needed for visually impaired students.

As long as no handicapped person is excluded from a program because of the lack

of an appropriate aid, the recipient need not have all such aids on hand at all times. Thus, readers need not be available in the recipient's library at all times so long as the schedule of times when a reader is available is established, is adhered to, and is sufficient. Of course, recipients are not required to maintain a complete braille library.

32. Housing. Section 104.43(a) requires postsecondary institutions to provide housing to handicapped students at the same cost as they provide it to other students and in a convenient, accessible, and comparable manner. Commenters, particularly blind persons pointed out that some handicapped persons can live in any college housing and need not wait to the end of the transition period in Subpart C to be offered the same variety and scope of housing accommodations given to nonhandicapped persons. The Department concurs with this position and will interpret this section accordingly.

A number of colleges and universities reacted negatively to paragraph (b) of this section. It provides that, if a recipient assists in making off-campus housing available to its students, it should develop and implement procedures to assure itself that off-campus housing, as a whole, is available to handicapped students. Since postsecondary institutions are presently required to assure themselves that off-campus housing is provided in a manner that does not discriminate on the basis of sex (§ 100.32 of the title IX regulation), they may use the procedures developed under title IX in order to comply with § 104.43(b). It should be emphasized that not every off-campus living accommodation need be made accessible to handicapped persons.

33. Health and insurance. A proposed section, providing that recipients may not discriminate on the basis of handicap in the provision of health related services, has been deleted as duplicative of the general provisions of section 104.43. This deletion represents no change in the obligation of recipients to provide nondiscriminatory health and insurance plans. The Department will continue to require that nondiscriminatory health services be provided to handicapped students. Recipients are not required, however, to provide specialized services and aids to handicapped persons in health programs. If, for example, a college infirmary treats only simple disorders such as cuts, bruises, and colds, its obligation to handicapped persons is to treat such disorders for them.

34. Financial assistance. Section 104.48(a), prohibiting discrimination in providing financial assistance, remains substantively the same. It provides that recipients may not provide less assistance to or limit the eligibility of qualified handicapped persons for such assistance, whether the assistance is provided directly by the recipient or by another entity through the recipient's sponsorship. Awards that are made under wills, trusts, or similar legal instruments in a discriminatory manner are permissible, but only if the overall effect of the recipient's provision of financial assistance is not discriminatory on the basis of handicap.

It will not be considered discriminatory to deny, on the basis of handicap, an athletic

scholarship to a handicapped person if the handicap renders the person unable to qualify for the award. For example, a student who has a neurological disorder might be denied a varsity football scholarship on the basis of his inability to play football, but a deaf person could not, on the basis of handicap, be denied a scholarship for the school's diving team. The deaf person could, however, be denied a scholarship on the basis of comparative diving ability.

Commenters on § 104.43(b), which applies to assistance in obtaining outside employment for students, expressed similar concerns to those raised under § 104.43(b), concerning cooperative programs. This paragraph has been changed in the same manner as § 104.43(b) to include the "as a whole" concept and will be interpreted in the same manner as § 104.43(b).

35. Nonacademic services. Section 104.47 establishes nondiscrimination standards for physical education and athletics counseling and placement services, and social organizations. This section sets the same standards as does § 104.38 of Subpart D, discussed above, and will be interpreted in a similar fashion.

Subpart F—Health, Welfare, and Social Services

Subpart F applies to recipients that operate health, welfare, and social service programs. The Department received fewer comments on this subpart than on others.

Although many commented that Subpart F lacked specificity, these commenters provided neither concrete suggestions nor additions. Nevertheless, some changes have been made, pursuant to comment, to clarify the obligations of recipients in specific areas. In addition, in an effort to reduce duplication in the regulation, the section governing recipients providing health services has been consolidated with the section regulating providers of welfare and social services. Since the separate provisions that appeared in the proposed regulation were almost identical, no substantive change should be inferred from their consolidation.

Several commenters asked whether Subpart F applies to vocational rehabilitation agencies whose purpose is to assist in the rehabilitation of handicapped persons. To the extent that such agencies receive financial assistance from the Department, they are covered by Subpart F and all other relevant subparts of the regulation. Nothing in this regulation, however, precludes such agencies from servicing only handicapped persons. Indeed, § 104.4(c) permits recipients to offer services or benefits that are limited by federal law to handicapped persons or classes of handicapped persons.

Many comments suggested requiring state social service agencies to take an active role in the enforcement of section 504 with regard to local social service providers. The Department believes that the possibility for federal-state cooperation in the administration and enforcement of section 504 warrants further consideration.

A number of comments also discussed whether section 504 should be read to require payment of compensation to institutionalized handicapped patients who perform services

for the institution in which they reside. The Department of Labor has recently issued a proposed regulation under the Fair Labor Standards Act (FLSA) that covers the question of compensation for institutionalized persons. 42 FR 13226 (March 12, 1977). This Department will seek information and comment from the Department of Labor concerning that agency's experience administering the FLSA regulation.

36. Health, welfare, and other social service providers. Section 104.52(a) has been expanded in several respects. The addition of new paragraph (a)(2) is intended to make clear the basic requirement of equal opportunity to receive benefits or services in the health, welfare, and social service areas. The paragraph parallels §§ 104.4(b)(ii) and 104.43(b). New paragraph (a)(3) requires the provision of effective benefits or services, as defined in § 104.4(b)(2) (i.e., benefits or services which "afford handicapped persons equal opportunity to obtain the same result (or) to gain the same benefit . . .").

Section 104.52(a) also includes provisions concerning the limitation of benefits or services to handicapped persons and the subsection of handicapped persons to different eligibility standards. One common misconception about the regulation is that it would require specialized hospitals and other health care providers to treat all handicapped persons. The regulation makes no such requirement. Thus, a burn treatment center need not provide other types of medical treatment to handicapped persons unless it provides such medical services to nonhandicapped persons. It could not, however, refuse to treat the burns of a deaf person because of his or her deafness.

Commenters had raised the question of whether the prohibition against different standards of eligibility might preclude recipients from providing special services to handicapped persons or classes of handicapped persons. The regulation will not be so interpreted, and the specific section in question has been eliminated. Section 104.4(c) makes clear that special programs for handicapped persons are permitted.

A new paragraph (a)(5) concerning the provision of different or separate services or benefits has been added. This provision prohibits such treatment unless necessary to provide qualified handicapped persons with benefits and services that are as effective as those provided to others.

Section 104.52(b) has been amended to cover written material concerning waivers of rights or consent to treatment as well as general notices concerning health benefits or services. The section requires the recipient to ensure that qualified handicapped persons are not denied effective notice because of their handicap. For example, recipients could use several different types of notice in order to reach persons with impaired vision or hearing, such as brailled messages, radio spots, and tactile devices on cards or envelopes to inform blind persons of the need to call the recipient for further information.

Section 104.52(c) is a new section requiring recipient hospitals to establish a procedure for effective communication with persons with impaired hearing for the purpose of providing emergency health care. Although it

would be appropriate for a hospital to fulfill its responsibilities under this section by having a full-time interpreter for the deaf on staff, there may be other means of accomplishing the desired result of assuring that some means of communication is immediately available for deaf persons needing emergency treatment.

Section 104.52(c) also a new provision, requires recipients with fifteen or more employees to provide appropriate auxiliary aids for persons with impaired sensory, manual, or speaking skills. Further, the Assistant Secretary may require a small provider to furnish auxiliary aids where the provision of aids would not adversely affect the ability of the recipient to provide its health benefits or services.

37. Treatment of Drug Addicts and Alcoholics. Section 104.53 is a new section that prohibits discrimination in the treatment and admission of drug and alcohol addicts to hospitals and outpatient facilities. Section 104.53 prohibits discrimination against drug abusers by operators of outpatient facilities, despite the fact that section 407 pertains only to hospitals, because of the broader application of section 504. This provision does not mean that all hospitals and outpatient facilities must treat drug addiction and alcoholism. It simply means, for example, that a cancer clinic may not refuse to treat cancer patients simply because they are also alcoholics.

38. Education of institutionalized persons. The regulation retains § 104.54 of the proposed regulation that requires that an appropriate education be provided to qualified handicapped persons who are confined to residential institutions or day care centers.

Subpart G—Procedures

In § 104.61, the Secretary has adopted the title VI complaint and enforcement procedures for use in implementing section 504 until such time as they are superseded by the issuance of a consolidated procedural regulation applicable to all of the civil rights statutes and executive orders administered by the Department.

Appendix B—Guidelines for Eliminating Discrimination and Denial Of Services on the Basis of Race, Color, National Origin, Sex, and Handicap in Vocational Education Programs

Note.—For the text of these guidelines, see 34 CFR Part 100, Appendix B

APPENDIX E

FACULTY SURVEY

Background Information

1. Faculty Rank: T.A. ___ Instructor ___ Asst. Professor ___
Assoc. Professor ___ Full Professor ___ Other ___
2. College _____
3. Department _____
4. Sex: M ___ F ___
5. Primary Student Contact: Grad ___ Undergrad ___ Both ___
6. Previous interaction with persons known to have a learning disability. Yes ___ No ___
7. Acquired information about learning disabilities.
Yes ___ No ___
If yes, check type: reading ___ media ___ coursework ___
other ___
8. Primary job responsibility: Teaching ___ Research ___
Administration ___ Advising ___ Other _____
9. Length of postsecondary teaching experience: 0-5 years ___
6-10 years ___ 11-15 years ___ 16-20 years ___ over 20 ___

Survey Items

Read the statements below and respond by circling the one response which best represents your opinion using the following scale:

- 1 = Strongly Agree
2 = Agree
3 = Tend to Agree
4 = Tend to Disagree
5 = Disagree
6 = Strongly Disagree

- | | | |
|----|--|-------------|
| 1. | It is unfair to spend more money educating learning disabled students than other students. | 1 2 3 4 5 6 |
| 2. | Classroom environments are enriched by the presence of learning disabled students. | 1 2 3 4 5 6 |
| 3. | Learning disabled persons tend to feel sorry for themselves. | 1 2 3 4 5 6 |

- 1 = Strongly Agree
 2 = Agree
 3 = Tend to Agree
 4 = Tend to Disagree
 5 = Disagree
 6 = Strongly Disagree

- | | | | | | | | |
|-----|---|---|---|---|---|---|---|
| 4. | I believe that teaching learning disabled students could be very rewarding. | 1 | 2 | 3 | 4 | 5 | 6 |
| 5. | I feel uncomfortable around disabled people. | 1 | 2 | 3 | 4 | 5 | 6 |
| 6. | All of us are disabled to some degree. | 1 | 2 | 3 | 4 | 5 | 6 |
| 7. | Learning disabled people take more from society than they give back. | 1 | 2 | 3 | 4 | 5 | 6 |
| 8. | Few learning disabled students succeed in college. | 1 | 2 | 3 | 4 | 5 | 6 |
| 9. | A learning disabled student wanting to pursue a professional career should be discouraged from doing so. | 1 | 2 | 3 | 4 | 5 | 6 |
| 10. | Having learning disabled students in the classroom takes away from the quality of education other students receive. | 1 | 2 | 3 | 4 | 5 | 6 |
| 11. | It is acceptable to spend additional funds to make this university accessible to learning disabled students. | 1 | 2 | 3 | 4 | 5 | 6 |
| 12. | Learning disabled students often are perceived as irresponsible when in reality the problem may be a result of poor organization. | 1 | 2 | 3 | 4 | 5 | 6 |
| 13. | Poor writing and spelling skills are frequent problems faced by learning disabled students. | 1 | 2 | 3 | 4 | 5 | 6 |
| 14. | This university has special programs for learning disabled students. | 1 | 2 | 3 | 4 | 5 | 6 |

- 1 = Strongly Agree
 2 = Agree
 3 = Tend to Agree
 4 = Tend to Disagree
 5 = Disagree
 6 = Strongly Disagree

- | | | | | | | |
|---|---|---|---|---|---|---|
| 15. Poor academic performance of learning disabled students is most likely a result of study habits. | 1 | 2 | 3 | 4 | 5 | 6 |
| 16. I can recognize a learning disabled student. | 1 | 2 | 3 | 4 | 5 | 6 |
| 17. I know <u>when</u> to provide assistance to learning disabled individuals in my class. | 1 | 2 | 3 | 4 | 5 | 6 |
| 18. An adapted education program for learning disabled students may not eliminate academic failure. | 1 | 2 | 3 | 4 | 5 | 6 |
| 19. I know <u>how</u> to offer assistance to learning disabled individuals in my class. | 1 | 2 | 3 | 4 | 5 | 6 |
| 20. I know where to refer learning disabled students for help at this university. | 1 | 2 | 3 | 4 | 5 | 6 |
| 21. Learning disabled students at the postsecondary level are protected from discriminatory educational practices by federal law. | 1 | 2 | 3 | 4 | 5 | 6 |
| 22. Learning disabled students with reading problems often are slow readers and have difficulty with comprehension. | 1 | 2 | 3 | 4 | 5 | 6 |

Additional Comments:

APPENDIX F

STAFF SURVEY

Demographic Information

PLEASE CIRCLE THE APPROPRIATE RESPONSE:

- 1. Sex: Male Female
- 2. Teaching Experience: <5 5-10 11-15 16-20 21-25 >25
- 3. Educational Level: BA BA+18 MA MA+15 MA+30 Doctorate
- 4. Teaching Level: PS DK K 1 2 3 4 5 6 7 8 9 10
11 12
- 5. I am familiar with ADHD: Yes No
- 6. I have taught students I suspect had ADHD: Yes No
- 7. I have taught a diagnosed ADHD student in the past:
Yes No
- 8. I teach at: AE AHS DE DHS Weston Borland ICHS

SURVEY ITEMS

PLEASE READ THE FOLLOWING STATEMENTS AND CIRCLE THE RESPONSE THAT REFLECTS YOUR OPINION: Please complete each survey question.

- | | |
|--------------------|-----------------------|
| 1 = Strongly Agree | 4 = Tend to Disagree |
| 2 = Agree | 5 = Disagree |
| 3 = Tend to Agree | 6 = Strongly Disagree |

- 9. It is unfair to spend more money educating ADHD students than other students. 1 2 3 4 5 6
- 10. Classroom environments are enriched by the presence of ADHD students. 1 2 3 4 5 6
- 11. ADHD students tend to feel sorry for themselves. 1 2 3 4 5 6
- 12. I believe that teaching ADHD students could be very rewarding. 1 2 3 4 5 6
- 13. I feel uncomfortable around disabled people. 1 2 3 4 5 6
- 14. All of us are disabled to some degree. 1 2 3 4 5 6

1 = Strongly Agree 4 = Tend to Disagree
 2 = Agree 5 = Disagree
 3 = Tend to Agree 6 = Strongly Disagree

- | | | | | | | | |
|-----|--|---|---|---|---|---|---|
| 15. | ADHD students take more away from society than they give back. | 1 | 2 | 3 | 4 | 5 | 6 |
| 16. | Few ADHD students will succeed in college. | 1 | 2 | 3 | 4 | 5 | 6 |
| 17. | An ADHD student wanting to pursue a professional degree should be discouraged from doing so. | 1 | 2 | 3 | 4 | 5 | 6 |
| 18. | Having ADHD students in the classroom takes away from the quality of education other students receive. | 1 | 2 | 3 | 4 | 5 | 6 |
| 19. | It is acceptable to spend additional funds to make this school assessable to ADHD students. | 1 | 2 | 3 | 4 | 5 | 6 |
| 20. | ADHD students are often perceived as irresponsible when, in reality, the problem may be a result of poor organization. | 1 | 2 | 3 | 4 | 5 | 6 |
| 21. | Impulsivity and poor peer relations are frequent problems faced by ADHD students. | 1 | 2 | 3 | 4 | 5 | 6 |
| 22. | This school has special programs for ADHD students. | 1 | 2 | 3 | 4 | 5 | 6 |
| 23. | Poor academic performance of ADHD students is most likely a result of study habits. | 1 | 2 | 3 | 4 | 5 | 6 |
| 24. | I can recognize an ADHD student. | 1 | 2 | 3 | 4 | 5 | 6 |
| 25. | I know <u>when</u> to provide assistance to ADHD students in my class. | 1 | 2 | 3 | 4 | 5 | 6 |
| 26. | An adapted education program for ADHD students may not eliminate academic failure. | 1 | 2 | 3 | 4 | 5 | 6 |
| 27. | I know <u>how</u> to offer assistance to ADHD students in my class. | 1 | 2 | 3 | 4 | 5 | 6 |
| 28. | I know where to refer ADHD students for help at this district. | 1 | 2 | 3 | 4 | 5 | 6 |

1 = Strongly Agree
2 = Agree
3 = Tend to Agree

4 = Tend to Disagree
5 = Disagree
6 = Strongly Disagree

29. ADHD students are protected from discriminatory educational practices by Federal Law. 1 2 3 4 5 6
30. ADHD students with poor grades are often disorganized; have difficulty completing homework. 1 2 3 4 5 6

THANK YOU AND HAVE A NICE DAY

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ABSTRACT

A STUDY TO ASSESS ELEMENTARY AND SECONDARY LEVEL
EDUCATION TEACHERS' ATTITUDES AND KNOWLEDGE OF
ATTENTION DEFICIT HYPERACTIVITY DISORDER

by

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Section 504 of the American Disabilities Act of 1973 will be instrumental by requiring teachers to look at individual students and their differences rather than teach to a group of homogeneous students. However, the feasibility for an ADHD student to be appropriately identified, assessed, and treated in a collaborative manner can be hindered by negative, discriminatory attitudes or lack of knowledge. This study identified the teachers' attitudes and knowledge of ADHD and examined how attitude and knowledge were related to teacher gender, prior experience and level of education.

The subjects for this study were 149 general education teachers from three rural school districts with a total student population of 4,289. A slightly revised survey was used with permission from Aksamit, et al. from the University of Nebraska. The revisions involved changing LD to ADHD

terminology, and revising demographic questions to be applicable to the primary and secondary setting. The survey was administered to every general education teacher present at mandatory staff meetings. The school building principals distributed the survey to their staff and collected them approximately 15 minutes later. The researcher was available during those staff meetings to oversee the administration of the survey. The independent variables examined were: gender, level of education, and previous experience. The dependent variables were attitudes toward and knowledge of ADHD children.

Statistically significant differences were found between general educators' attitudes and knowledge of ADHD and teachers' gender, prior experience and level of education. Female teachers responded with a significantly greater positive attitude on whether an ADHD student would enrich the classroom, were rewarding to teach, did not take away from society, would succeed in college, should not be discouraged from pursuing a professional degree, and would not take away from the quality of education in the classroom. Females also reported significantly greater knowledge of the characteristics of ADHD and when interventions should be used. Males had a greater knowledge of special programs offered in the district. Those respondents with prior experience felt less negative about the ADHD student's contributions and ability to succeed. Those respondents with prior experience also reported greater knowledge in the identification and

intervention of ADHD students. Those respondents with a Master's degree had greater positive attitudes towards ADHD students pursuing a professional degree.

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